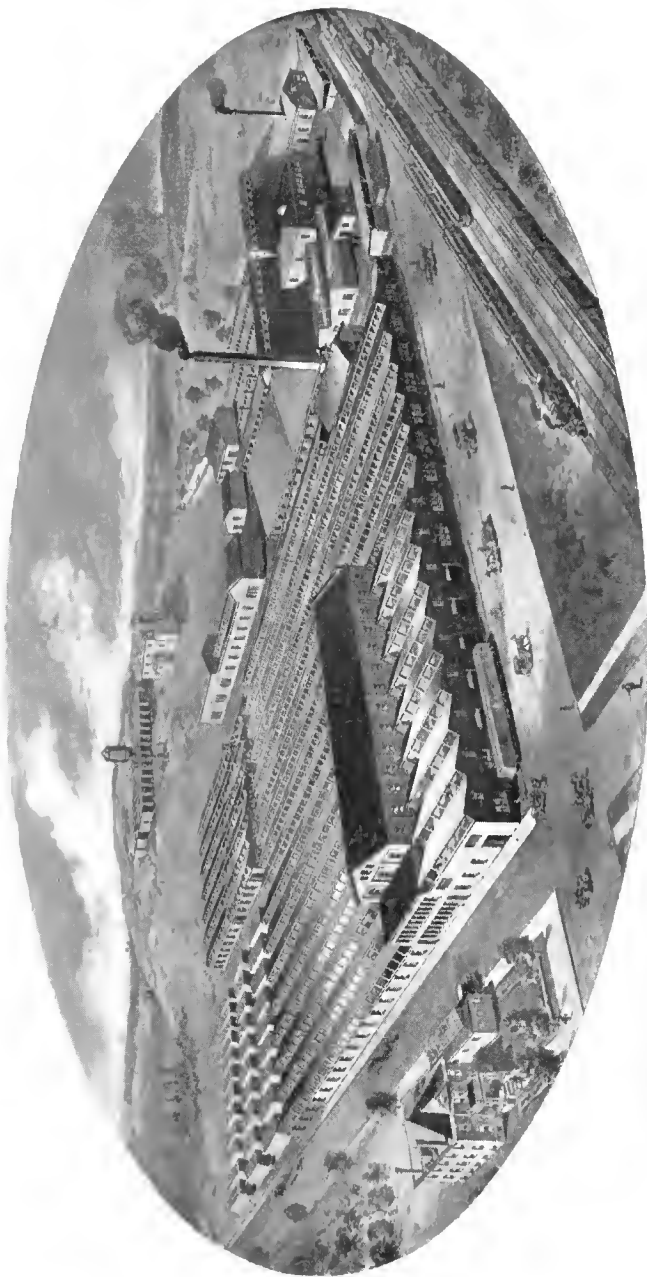




THE
SILVER MANUFACTURING CO.,
Salem, Ohio, U. S. A.



View of Head Office and Works of THE SILVER MANUFACTURING CO., located at
Salem, Ohio, U. S. A.

showing switch connections with the Pennsylvania and Erie Railroads. This is the home of Silver's "Ohio" Silo Fillers and Feed Cutters. The Plant is new and modern in every particular, having recently been thoroughly remodeled and greatly enlarged. The machine shop and erecting room alone have a ground floor space of approximately one and one-half acres.

CATALOG AND PRICE LIST
OF
MACHINE TOOLS
WOOD WORKERS'
AND
BLACKSMITHS' TOOLS

INCLUDING

20 in. Power Drills

Gang Drills

Drills, Hand and Power

Jointers, Swing Saws

Band Saws, Saw Tables

Portable Forges

Mechanical Blowers

In addition to the above, we manufacture a complete line of Feed
and Ensilage Cutters, also some Carriage Makers' and
Butchers' Tools. We shall be glad, upon appli-
cation, to furnish separate catalogs
covering these lines

MANUFACTURED BY

THE SILVER MFG. COMPANY
SALEM, OHIO, U. S. A.

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THE CATALOG

IN order to keep our customers in touch with our latest improvements and additions, we have issued this catalog, which embraces all of the articles we manufacture in the Machine Tool, Wood Working and Blacksmith lines. A complete repair list for these machines will be furnished on application.

Code Words.—A cipher word is added to the price list, which may be used to specify articles when it becomes necessary to telegraph for goods.

Foreign Trade.—Our export department has been supplying the overseas markets for more than forty-five years and has enjoyed a continually increasing patronage. Particular care is exercised in boxing all machines for sea shipment, all cases being iron strapped, contents securely protected and anchored, bright parts heavy grease-coated to prevent sea rust. Long experience has enabled us to eliminate packing defects and to design cases with a view to smallest possible measurement. Weights and measurements indicated in this catalog enable buyers to closely calculate delivered cost of goods. We will be pleased to quote C. I. F. prices on any proposed order upon application.

The Goods.—They embrace several distinctive lines and all of the articles are standard makes, their merits and efficiency having been proven by years of practical use. Improvements are made from time to time, as necessity warrants, which keeps the various tools and machines abreast of the times.

Factory.—The factory is laid out along the lines of greatest efficiency. It is commodious and convenient and is equipped with every facility for the proper and economic manufacture of goods, including much machinery especially designed and built for the particular work in hand.

Shipping.—The illustration of the works on a preceding page shows switch connections with the Pennsylvania and Erie Railroads, by means of which fuel and all materials are brought into the works and all car load shipments are taken out. We also endeavor to carry full stocks of goods and give the prompt execution of orders our special attention.

Manufacturing.—Exceptional care is exercised in this department and each part is correctly manufactured and the tools properly constructed and put together, so that they may operate accurately. We now ship to every state in the Union and to every civilized country. We shall continue to hold our goods to present high standard, make prompt shipments, treat our customers fairly and shall hope for a continuance of the liberal patronage which we have enjoyed in the past.

Yours respectfully,

THE SILVER MANUFACTURING CO.

Silver's 20-Inch Swing Drill

LEVER FEED
Round or Square Base

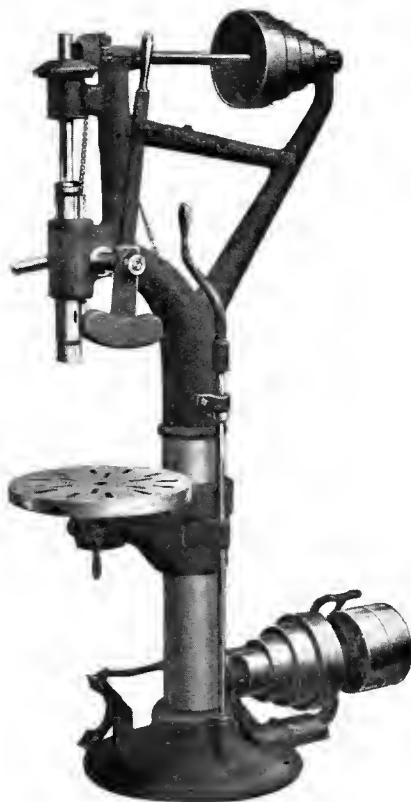


Fig. 855

Specifications on Page 13

Fig. 855 with round base, complete as shown; drive shaft with tight and loose pulleys, weight crated, 680 pounds.....	\$85.00	Ojzom
Fig. 856 with square base, otherwise same as Fig. 855; weight crated, 720 pounds.....	90.00	Ojzud
Friction countershaft for tapping, (see page 12), either style, extra	20.00	Okaif
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 855.....	2.00	Okaly
Wheel-holding attachment to clamp to column, with spindle to go through wheel, on Fig. 855.....	5.00	Okame

Silver's 20-Inch Swing Drill

COMBINED LEVER AND WHEEL FEED

Round or Square Base



Fig. 858

Specifications on Page 13

Fig. 858 with square base, complete as shown; drive shaft with tight and loose pulleys, weight crated, 725 pounds	\$95.00	Okaap
Fig. 857 with round base, otherwise same as Fig. 858; weight crated, 680 pounds	90.00	Ojzyp
Friction countershaft for tapping, (see page 12), either style, extra	20.00	Okaif
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 857	2.00	Okaly
Wheel-holding attachment to clamp to column, with spindle to go through wheel, on Fig. 857	5.00	Okame

Silver's 20-Inch Swing Drill

POWER FEED AND AUTOMATIC STOP

Round or Square Base



Fig. 859

Specifications on Page 13

Fig. 859 with round base, complete as shown; drive shaft with tight and loose pulleys, weight crated, 715 pounds.....	\$110.00	Okaci
Fig. 860 with square base, otherwise same as Fig. 859; weight crated, 750 pounds.....	115.00	Okaeb
Friction countershaft for tapping, (see page 12), either style, extra	20.00	Okaif
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 859.....	2.00	Okaly
Wheel-holding attachment to clamp to column, with spindle to go through wheel, on Fig. 859.....	5.00	Okame

Silver's 20-Inch Swing Drill

POWER FEED WITH BACK GEARS AND AUTOMATIC STOP

Round or Square Base

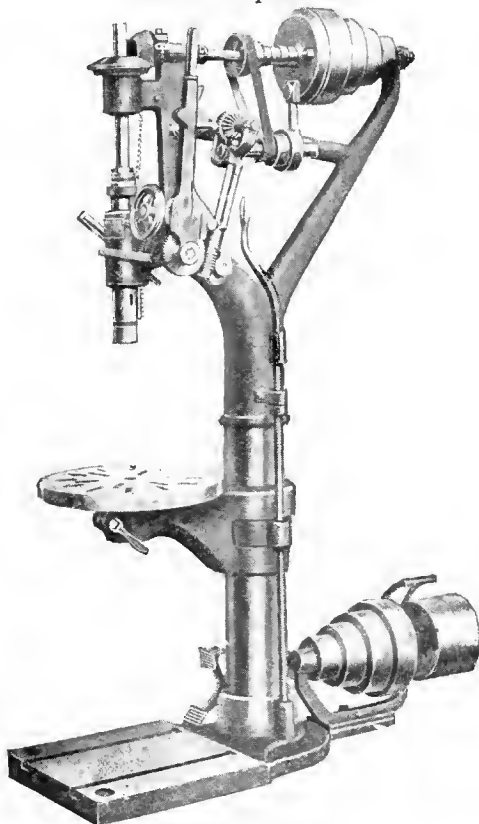


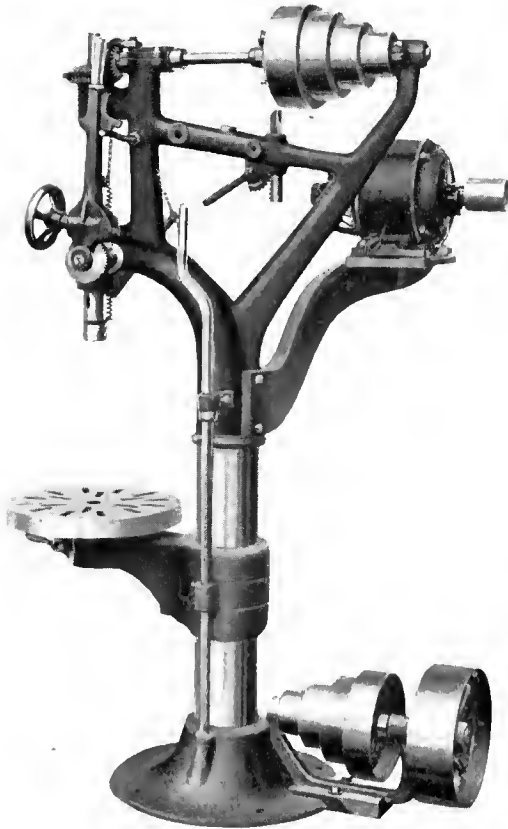
Fig. 862

Specifications on Page 13

Fig. 862 with square base, complete as shown; drive shaft with tight and loose pulleys, weight crated 780 pounds.	\$130.00	Okago
Fig. 862 Less power feed and automatic stop	115.00	Okeal
Fig. 861 with round base, otherwise same as Fig. 862; weight crated, 745 pounds	125.00	Okafa
Fig. 861 Less power feed and automatic stop	110.00	Okect
Friction countershaft for tapping, (see page 12), either style, extra	20.00	Okaif
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 861	2.00	Okaly
Wheel-holding attachment to clamp to column, with spindle to go through wheel, on Fig. 861	5.00	Okame

Silver's 20-Inch Swing Drill

SHOWING BELT MOTOR DRIVE



Drill Specifications on Page 13

The illustration shows one of Silver's 20-inch Power Drills equipped with individual belt motor drive. Any of our regular Power Drills can be furnished with this drive, or with geared drive as shown on opposite page, as desired by our customers.

Either alternating or direct current motors can be supplied, and in ordering be sure to state kind of current and voltage. If alternating current, state phase and cycles.

Prices Quoted on Application.

Silver's 20-Inch Swing Drill

SHOWING GEARED MOTOR DRIVE



Drill Specifications on Page 13

The geared motor drive shown in above illustration can be furnished with any of our regular Power Drills described in preceding pages, with either alternating or direct current motors. It is necessary to mention, when ordering, the kind of current and the voltage and if alternating current, state phase and cycles.

Silver's 20-inch Drills can also be equipped with Belt Motor Drive when desired, as shown on opposite page.

Prices Quoted on Application.

Silver's 20-inch Swing Drill

SHOWING FRICTION COUNTERSHAFT



Drill Specifications on Page 13.

This illustrates the friction countershaft used on Silver's 20-Inch Power Drills for tapping and drilling work.

Friction Countershaft for Power Drills, as shown-----\$20.00 Okalf

Description of Silver's New Power Drills

Illustrated and Listed on Pages 6 to 17

Particularly designed and adapted to meet the up-to-date and exacting requirements of modern machine shop practice, we believe these new 20-inch Drills have every good feature that can be demanded in Drills of this kind.

Increased strength and efficiency, and more simple and convenient operation are results of the improvements.

Four distinct styles comprise the new line. Each style is made with either round or square base.

The Plain Lever Feed is suited for all ordinary work that comes to a Drill of this kind.

The Combined Lever and Wheel Feed permits either the lever or the wheel to be used without affecting the other.

The Power Feed and Automatic Stop requires only to be started and will stop automatically wherever set, at any required depth. This action is entirely independent of the wheel or the lever feed; either of these can be used in addition.

The Power Feed with Back Gearing and Automatic Stop has, in addition to the features of the other drills, a back-gear mechanism. By means of this, four slow speeds are provided for heavier work, making a total of eight different speeds. This style also furnished, when wanted, without power feed and automatic stop.

The Substantial Appearance Denotes Quality. New patterns thruout—every detail carefully worked out—materials the best procurable. Bevel gears are accurately cut from solid blanks, the cog rack is forged from steel and the teeth are milled to gauge.

Upper shaft has split bearings to take up any possible wear.

Table has easy up-and-down adjustment and swings to either side.

When the tool is wanted only for drilling, the countershaft for it is provided with tight and loose pulleys 8 inches diameter by 23½ inch face, as shown on pages 6 to 10, and should make 325 revolutions per minute. For tapping and drilling a friction countershaft is required, as shown opposite.

Drive Shaft turns 1½ times to 1 turn of spindle.

DIMENSIONS OF SILVER'S 20-INCH POWER DRILL

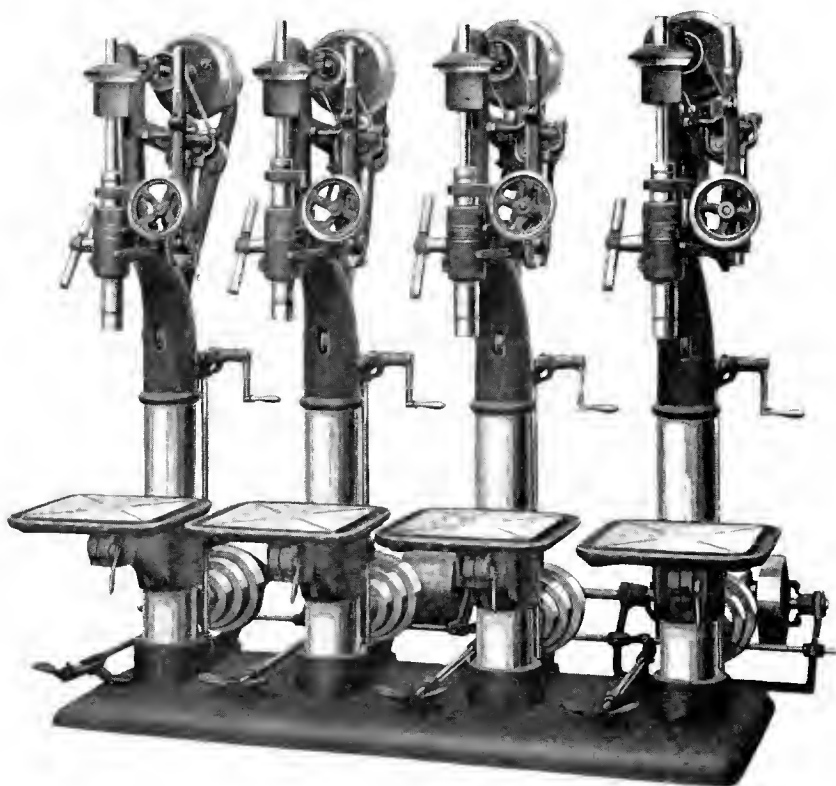
Height	68¾ inches
Diameter of column	5½ inches
Diameter table	16 inches
Diameter spindle	1¾ inches
Vertical travel of spindle	10 inches
Vertical travel of table	16 inches
Spindle bored for No. 3 Morse taper.	
Distance from column to center of table	10¼ inches
Distance from spindle to base	41½ inches
Distance from spindle to table	26½ inches
Diameter of crown gear	5½ inches
Diameter of bevel pinion	3¾ inches
Diameter large pulley on cone	9¼ inches
Diameter small pulley on cone	4 inches
Cone carries 2-inch belt.	
Tight and loose pulleys	8x 2¾ inches
Floor space—square base	46x16 inches
Floor space—round base	36x20 inches

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Fig. 855.	Net 585 pounds, gross 780 pounds, 354 kilos., 22 cubic feet
Fig. 856.	Net 605 pounds, gross 800 pounds, 363 kilos., 22 cubic feet
Fig. 857.	Net 615 pounds, gross 800 pounds, 354 kilos., 22 cubic feet
Fig. 858.	Net 665 pounds, gross 830 pounds, 376 kilos., 22 cubic feet
Fig. 859.	Net 635 pounds, gross 830 pounds, 376 kilos., 22 cubic feet
Fig. 860.	Net 670 pounds, gross 860 pounds, 390 kilos., 22 cubic feet
Fig. 861.	Net 670 pounds, gross 860 pounds, 390 kilos., 22 cubic feet
Fig. 862.	Net 680 pounds, gross 880 pounds, 399 kilos., 22 cubic feet

Friction countershaft adds 40 pounds, 18 kilos., 00 cubic feet

Silver's 20-inch Swing Gang Drills



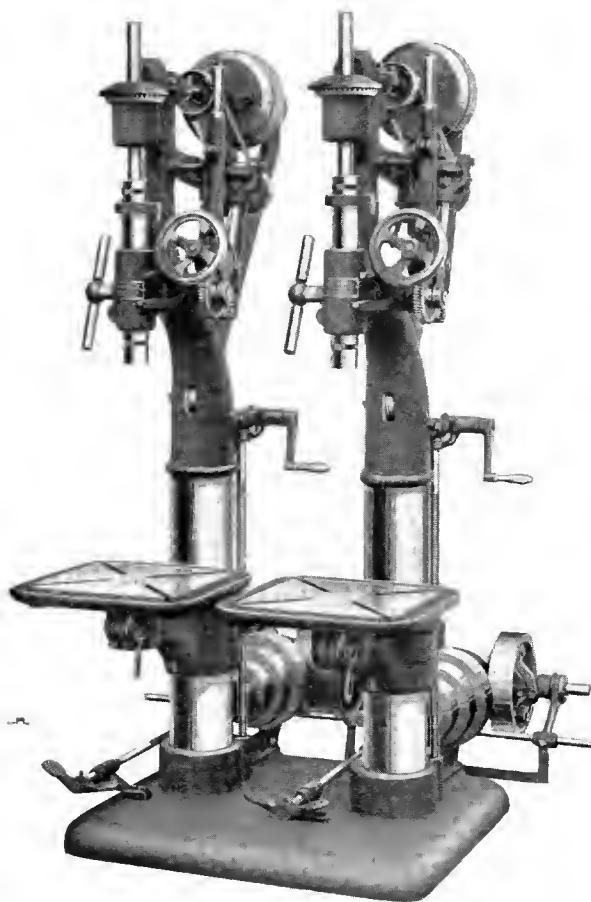
The Drills illustrated on preceding pages are here shown in gangs of two, three and four spindles, which are much in demand just now for cutting labor costs and reducing operating expenses to the minimum.

Each spindle is separate from the others and may be equipped independently with either the plain Lever Feed, Lever and Wheel Feed, Power Feed and Automatic Stop and with Back Gearing, as described on page 13.

The individual table for each spindle is adjustable up and down or to

(Specifications on page 17)

Silver's 20-inch Swing Gang Drills

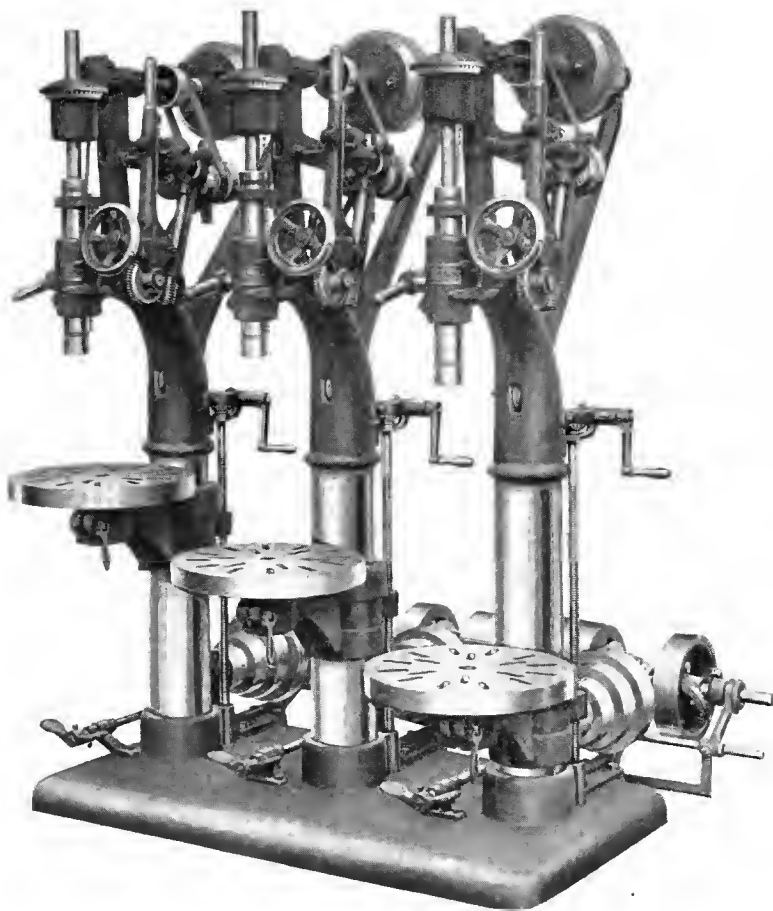


either side, and allows a wide range of work at one time. Choice of either round or square tables at same price.

The countershaft, shown on page 17, has single drive pulley and separate drive for each Drill. One friction tapping attachment is included with each Gang.

(Specifications on page 17)

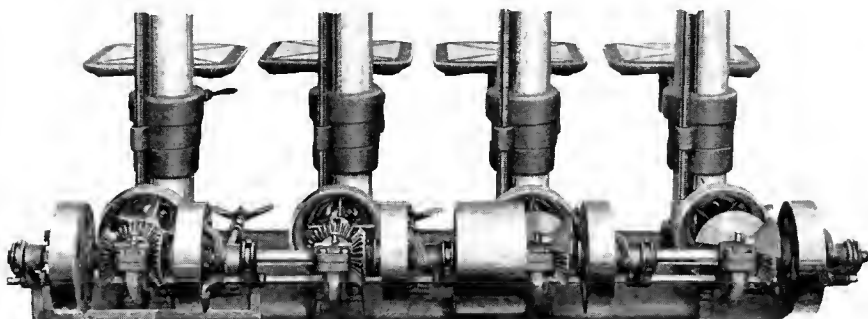
Silver's 20-inch Swing Gang Drills



This three-spindle gang, like the two and four-spindle Drills just shown, may be furnished in any of the four styles of equipment indicated on preceding pages. The back gear mechanism provides four slow speeds for heavier work, giving a total of eight different speeds.

(Specifications on page 17)

Countershaft for Silver's 20-inch Gang Drills



The Countershaft is made for either two, three or four drills. It has but one drive pulley, placed in the center of the shaft, which not only saves considerable floor space over the ordinary tight and loose pulley method, but saves many dollars in the cost of belting. Each spindle is independent of the others, thus all spindles may be operated at one time or individually. Each gang includes one friction tapping attachment as shown at left of cut and other spindles can be thus equipped when desired at slight additional cost.

LIST PRICES

Of Silver's 20-inch Drills in Gangs of Two, Three or Four Spindles

With plain Lever Feed like Fig. 856, per spindle.....	\$110.00	Okgnu
With Wheel and Lever Feed like Fig. 858, per spindle.....	115.00	Okgoh
With Wheel-lever, Power Feed and Automatic Stop like Fig. 860, per spindle.....	135.00	Okguw
With Wheel-lever, Power Feed, Back Gears and Automatic Stop like Fig. 862, per spindle.....	150.00	Okhaz
Extra for additional tapping attachments, per spindle.....	20.00	Okher

(One tapping attachment included with each gang.)

Any of above styles can be placed in one gang and the combined prices of such styles will apply as shown.

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- 2 Spindle, style Fig. 862 (3 cases), gross 2000 pounds, 907 kilos., 47 cubic feet.
 - 3 Spindle, style Fig. 862 (4 cases), gross 3000 pounds, 1360 kilos., 71 cubic feet.
 - 4 Spindle, style Fig. 862 (5 cases), gross 4100 pounds, 1814 kilos., 95 cubic feet.
- These weights will be less in proportion for all other styles. Measurements same.

Specifications Applying to Gang Drills

Diameter round table.....	16	inches
Diameter square table over all.....	16½x16½	inches
Diameter square table planed surface.....	13¼x13¼	inches
Distance between spindles, center to center.....	18	inches
Floor space—including countershaft, 2 spindle.....	41½x42½	inches
Floor space—including countershaft, 3 spindle.....	41½x60	inches
Floor space—including countershaft, 4 spindle.....	41½x78	inches
Countershaft drive pulley.....	10 x 6	inches

See Page 13 for Full Specifications of Power Drills

Silver's No. 21 Hand Post Drill

With Ball Bearings, Hand or Self Feed, Two Speeds



New Ball Bearing Feed
Nut Used on Nos. 21, 22,
23 and 24 Drills.

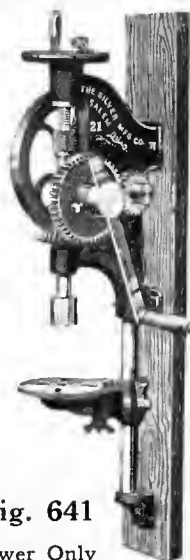


Fig. 641

For Hand Power Only

Fig. 641 is an excellent tool for light drilling of all kinds. It is constructed from entirely new patterns and is strong, rapid and complete. Has two speeds, changed by simply moving crank hub from one shaft to the other. Hand feed; or continuous self feed worked by cam on inside of main gear wheel and adjusted by thumb screw. Table adjustable up and down or side-wise.

The cross section of our new ball bearing feed nut shown above gives a good idea of the perfect frictionless construction of this important part of the spindle. This feed nut is complete in itself. It will be seen that the balls are absolutely dust-proof. They take the spindle thrust without any wear or lost motion whatever, and reduce the friction at this point to the minimum. The power required for running is reduced from 20 to 50 per cent. The ball bearings also overcome the necessity of frequent oiling. The balls are of first quality and are carried in discs or cups of best case hardened steel.

Dimensions—Size of spindle, 1 inch; run of spindle, 3 inches; size of column, $1\frac{3}{8}$ inches; greatest distance spindle to table, 10 inches; spindle turns $1\frac{1}{2}$ times to 1 turn of crank on fast speed; crank turns $1\frac{1}{2}$ times to 1 turn of spindle on slow speed; drills 1 inch to center of 12 inch circle. Upright column and spindle are of steel. Total height 38 inches.

SIZE AND PRICE

Fig. 641, No. 21, for hand use only, as shown, weight crated,	
75 lbs.	\$ 8.50
Chuck for bit stock drills.....	1.00
	Ojsis Ojsli

Boxed for Export

Fig. 641 (6 drills). Net 430 pounds, gross 510 pounds, 231 kilos., 11 cubic feet

Silver's No. 22 Self Feed Post Drill

WITH BALL BEARINGS AND INTERMEDIATE GEAR

Fast or Slow Speed

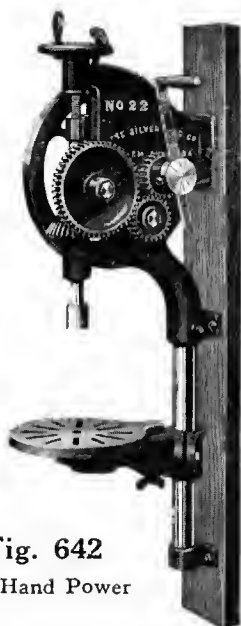


Fig. 642
For Hand Power

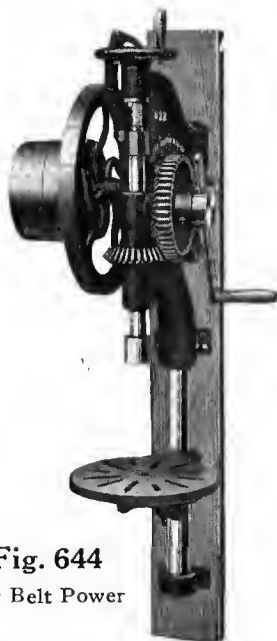


Fig. 644
For Hand or Belt Power

A perfect drill for light and medium work. The intermediate gear wheel eliminates necessity of turning crank reverse direction on slow speed. Has adjustable table. The ball bearing feed nut saves 20 to 50 per cent. in power; (see page 18). Balls of best quality steel are carried in case hardened steel discs.

Drill has ground bearings, machine molded gears, and automatic feeding device, which gives nearly a continuous feed, avoiding jamming and breaking of bits. The feed can be increased or diminished by simply turning a thumb screw.

Spindle and shafts are of steel, with bearings bored and reamed in solid frame.

Dimensions—Size of spindle, 1 inch; run of spindle, $3\frac{3}{4}$ inches; size of column, 1 $\frac{9}{16}$ inches; greatest distance of spindle to table 13 inches; spindle turns $1\frac{1}{2}$ times to one turn of crank on fast speed; crank turns $1\frac{1}{4}$ times to one turn of spindle on slow speed; drills to center of 15-inch circle and up to $\frac{1}{4}$ -inch holes; spindle bored for $\frac{1}{2}$ -inch round shaft drills, unless otherwise ordered. Total height, 48 inches.

Tight and loose pulleys measure $8 \times 2\frac{1}{2}$ inches. They should be speeded about 250 revolutions, which will turn the spindle 170.

SIZES AND PRICES

Fig. 642. No. 22, for hand use only, weight crated, 110 lbs.	\$10.00	Ojsnu
Fig. 644. No. 22, for hand or belt power, weight crated, 125 lbs.	14.00	Ojsnh
Chuck for Bit Stock Drills	1.00	Ojsli

Boxed for Export

Fig. 642 (4 drills). Net 390 pounds, gross 475 pounds, 215 kilos., 10 cubic feet

Fig. 644 (4 drills). Net 460 pounds, gross 535 pounds, 243 kilos., 10 cubic feet

Fig. 642, net 105 pounds, gross 140 pounds, 63 kilos., $\frac{3}{4}$ cubic feet

Fig. 644, net 120 pounds, gross 155 pounds, 70 kilos., $\frac{3}{4}$ cubic feet

Silver's No. 23 Self Feed Post Drill

WITH BALL BEARINGS AND INTERMEDIATE GEAR

Fast or Slow Speed



Fig. 646
For Hand Power



Fig. 648
For Hand or Belt Power

From 20 to 50 per cent. in power is saved by our Ball Bearing Feed Nut. See illustration and description, page 18. Intermediate gear eliminates the necessity of turning crank reverse direction on slow speed. Table moves up or down, or to either side. The Automatic Feeding device, located back of spindle, gives nearly a continuous feed. Feed can be regulated by thumb screw. Frame is neat and solid, cast in one piece. All bearings, like on high priced drills, ground from the solid metal to working fit. Gears are machine molded and of perfect mesh. Spindle and shafts are of steel.

Dimensions—Size of spindle, 1½ inches; run of spindle, 4 inches; size of column, 2 inches; greatest distance of spindle to table, 16 inches; spindle turns 1½ times to 1 turn of crank on fast speed; crank turns 1½ times to 1 turn of spindle on slow speed; drills to center of 18-inch circle and up to 1½ inch holes. Spindle bored for ½-inch shank drills, unless otherwise ordered. Total height 50 inches.

Tight and loose pulleys measure 8x2½ inches. They should be speeded about 250 revolutions, which will turn the spindle 170.

SIZES AND PRICES

Fig. 648. No. 23, for hand or belt power, weight crated, 185

Fig. 646. No. 23, for hand use only, weight crated, 165 lbs. \$16.00

lbs. 20.00

Chuck for bit stock drills. 1.00

Ojspe
Ojsuw
Ojsli

Boxed for Export

Fig. 646. (4 drills). Net 630 pounds, gross 770 pounds, 349 kilos., 14 cubic feet

Fig. 648. (4 drills). Net 700 pounds, gross 840 pounds, 381 kilos., 14 cubic feet

Silver's No. 24 Self Feed Post Drill

WITH BALL BEARINGS
AND
INTERMEDIATE GEAR

Fast or
Slow Speed

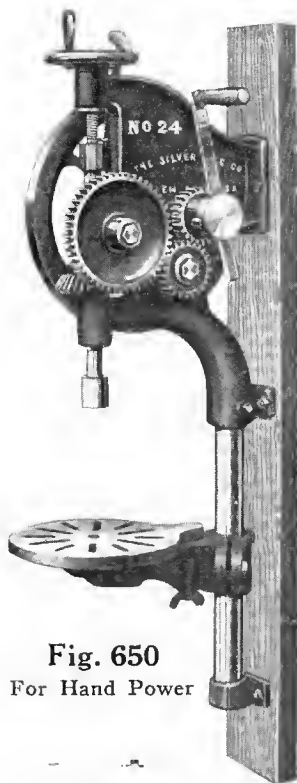


Fig. 650
For Hand Power

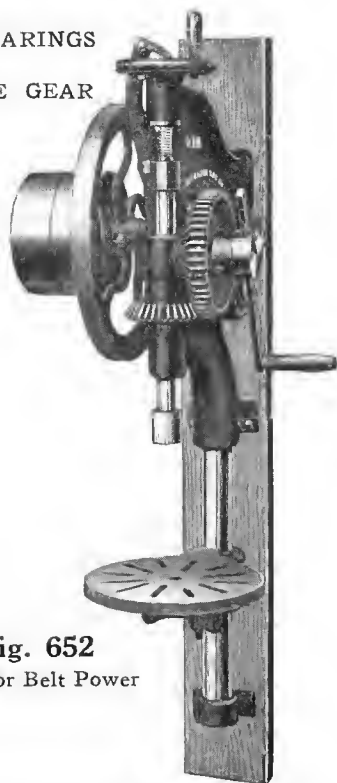


Fig. 652
Hand or Belt Power

Strong enough for heaviest hand drilling. Adapted for use in small shops, repair shops and iron furnaces. Has two speeds, self-feed, adjustable feed table, is well built and is durable. It is symmetrical in design and is recommended for all kinds of drilling.

Fig. 650 illustrates the slow speed position of crank. The intermediate gear eliminates the necessity of turning crank the reverse direction on this speed.

Equipped with new ball bearing feed nut, shown and described on page 18. Spindle and shafts are of steel. As on high priced drills, all bearings are bored out of solid metal and reamed to a working fit. Perfect mesh machine molded gears are used. The automatic feeding device, operated by cam inside of gear wheel, gives nearly a continuous feed and can be regulated by thumb screw.

Dimensions—Size of spindle, $1\frac{1}{4}$ inches; run of spindle, $4\frac{1}{4}$ inches; size of column, $2\frac{3}{4}$ inches; greatest distance of spindle to table, 18 inches; spindle turns $1\frac{1}{2}$ times to 1 turn of crank on fast speed; crank turns $1\frac{1}{2}$ times to 1 turn of spindle on slow speed; drills to center of 22-inch circle and up to $1\frac{1}{2}$ -inch holes; spindle bored for $\frac{1}{4}$ -inch shank drills, unless otherwise ordered. Total height, 54 inches. Tight and loose pulleys measure $8 \times 2\frac{1}{4}$ inches. They should be speeded about 250 revolutions, which will turn the spindle 170.

SIZES AND PRICES

Fig. 650. No. 24, for hand use only, as shown, weight crated, 220 pounds \$25.00
Fig. 652. No. 24, for hand or belt power, weight crated, 240 pounds 29.00
Chuck for bit stock drills 1.00

Ojswa
Ojtam
Ojsli

Boxed for Export

Fig. 650. (2 drills).—Net 430 pounds, gross 500 pounds, 227 kilos., 11 cubic feet
Fig. 652. (2 drills).—Net 470 pounds, gross 535 pounds, 243 kilos., 11 cubic feet

Silver's Hand Post Drills

SINGLE GEARED, HAND FEED



Fig. 730
No. 1 1/2

DOUBLE GEARED, SELF FEED



Fig. 731
No. 1

Perfect drills—strong, rapid and complete. Hand or continuous automatic feed. These drills are absolutely reliable in quality and workmanship—the product of the highest mechanical skill—and are finished in a very neat and attractive manner.

Dimensions—Fig. 730. Floor space over all, 8x13 inches. Height of drill 36 inches. Upright column diameter 1 3/8 inches. Diameter of drive gear wheel 6 1/2 inches, diameter of table 6 inches. Greatest distance of spindle to table 10 1/2 inches. Drills 3/4 inch to center of 12-inch circle. Drill spindle is 1-inch steel, and bored for 1/2-inch straight shank drills. Feed has run of 2 1/2 inches. Upright column and feed screw are of steel.

Dimensions—Fig. 731. Floor space over all, 9x16 inches. Total height 37 inches. Upright column, 1 3/8 inches diameter. Drive gear wheel 8 inches diameter; table 6 inches diameter; greatest distance of spindle to table 10 1/2 inches. Fly wheel diameter 10 1/2 inches.

Has extension crank and adjustable feed. Drills 3/4 inch to center of 12-inch circle. Drill spindle is 1 inch steel, and bored for 1/2-inch straight shank drills. Feed has run of 2 1/2 inches. Upright column and feed screw are of steel.

SIZES AND PRICES

Fig. 730, No. 1 1/2. Weight 55 pounds.....	\$6.00	Ojreh
Fig. 731, No. 1. Weight 75 pounds.....	8.00	Ojrv
Chuck for bit stock drills, to fit either size.....	1.00	Ojsli

Boxed for Export

Fig. 730 (6 drills). Net 320 pounds, gross 400 pounds, 181 kilos., 11 cubic feet
Fig. 731 (6 drills). Net 410 pounds, gross 500 pounds, 222 kilos., 11 cubic feet

Silver's Hand Post Drills

DOUBLE GEARED, SELF FEED

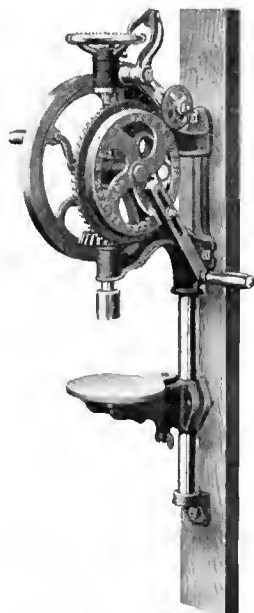


Fig. 732—No. 2

Total height 45 inches. Upright column $1\frac{1}{8}$ inches diameter; table 7 inches diameter; drive gear wheel 10 inches diameter; fly wheel 14 inches diameter; greatest distance of spindle to table $10\frac{1}{2}$ inches.

Dimensions—Fig. 734. Floor space over all 15x19 inches. Has extension crank and variable feed. Drills 0 to $1\frac{1}{4}$ -inch holes, and to center of 16-inch circle. Drill spindle bored for $\frac{1}{2}$ -inch straight shank drills. Feed has run of 3 inches. Upright column, drill spindle and feed screw are of **steel**.

Total height 49 inches; upright column $1\frac{1}{8}$ inches diameter; table 8 inches diameter; drive gear wheel 12 inches diameter; fly wheel 16 inches diameter; greatest distance of spindle to table 13 inches.

DOUBLE GEARED, SELF FEED

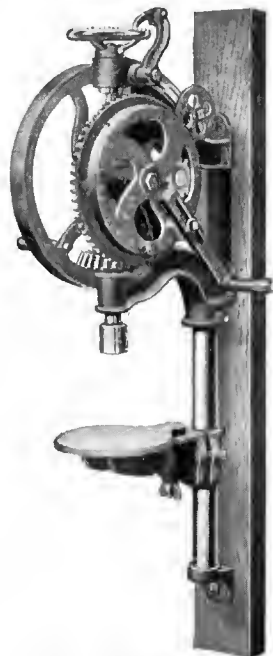


Fig. 734—No. 3

Built by skilled mechanics in our own factory, we guarantee every part of these drills to be a good part and able to perform its work accurately. Rigid and powerful, yet simple in construction, they will stand the hardest kind of service.

Dimensions
—Fig. 732. Floor space over all, 10 x 16 inches. Has extension crank and adjustable feed. Drills 0 to 1 inch holes, and to center of $14\frac{1}{2}$ -inch circle. Drill spindle bored for $\frac{1}{2}$ -in. straight shank drills. Feed has run of 3 inches. Upright column, drill spindle and feed screw are of **steel**.

SIZES AND PRICES

Fig. 732, No. 2. Weight 105 pounds.....	\$10.00	Ojrut
Fig. 734, No. 3. Weight 135 pounds.....	14.00	Ojsan
Chuck for bit stock drills, to fit either size.....	1.00	Ojsli

Boxed for Export

Fig. 732 (4 drills). Net 370 pounds, gross 445 pounds, 201 kilos., 10 cubic feet
Fig. 734 (3 drills). Net 380 pounds, gross 450 pounds, 204 kilos., 11 cubic feet

Silver's Power Post Drill

LEVER FEED, 19-INCH SWING

This drill is made from new patterns, and is especially designed for the use of carriage and wagon makers. It is also adapted to machine work and is suited to all kinds of repairs.

It has machine cut gears, and all parts are accurately machined and closely fitted.

Spindle has long feed lever for heavy work and a short one for light work and **quick return**. It is counterbalanced by a weight in the hollow column, and the lever is balanced by a weight at its lower end, as shown, which serves to carry it in an upright position, out of the way of the operator, after use. The feed lever is also provided with our handy **stop latch**, which serves to disconnect it from the spindle and hold to upright position when using the quick-return lever.

Drill Table is quickly and easily raised or lowered by one hand of the operator, from his position at the drill, either standing or sitting. The table revolves in the supporting arm, and may be swung to the right or left, out from under the drill spindle.

The clamping screws that hold the table and supporting arm in position are provided with levers, thus avoiding the use of wrenches.

Countershaft has tight and loose pulleys, 8 inches diameter by $2\frac{3}{4}$ inch face, and should make 200 revolutions per minute.

Dimensions—Height of drill, 60 inches; diameter of column, $4\frac{1}{2}$ inches; diameter table, $14\frac{1}{2}$ inches; diameter spindle $1\frac{1}{2}$ inches; vertical travel, 6 inches; spindle bored for No. 2 Morse taper; greatest distance from spindle to table, 24 inches; diameter large pulley on cone, 7 inches; small pulley, 3 inches; cones carry 2-inch belt; countershaft pulleys, $2\frac{1}{2}$ inch; drills to center of 19-inch circle; floor space over all, $14\frac{1}{2} \times 36$ inches.



Fig. 727

PRICE

Complete with countershaft, weight crated, 350 pounds-----	\$65.00	Ojtek
V-shaped attachment for holding wheels to fit in supporting arm-----	2.00	Ojtin
Wheel-holding attachment to clamp to column, with spindle to go through wheel-----	5.00	Ojtoc

Boxed for Export

Net 320 pounds, gross 430 pounds, 195 kilos., 12 cubic feet

No. 12 Bench Drilling Machine

FOR HAND POWER

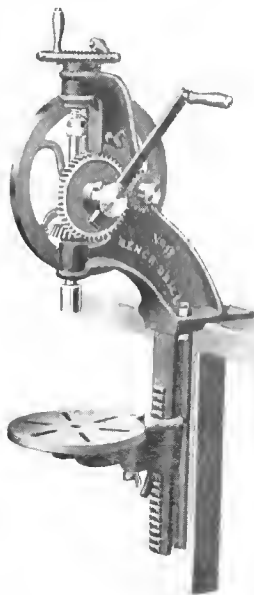


Fig. 741, No. 12

Fast or Slow Speed—Self-Feed

This machine is designed to fasten to a work bench as shown. The supporting arm for drill table is adjustable up and down and has a range of 12 inches, and the drill table swings to the right or left.

Dimensions—Size of spindle, 1 inch; run of spindle, 3 inches; spindle turns $1\frac{1}{2}$ times to 1 turn of crank on fast speed; crank turns $1\frac{1}{2}$ times to 1 turn of spindle on slow speed; drills to center of 15-inch circle, and up to $1\frac{1}{4}$ -inch holes; spindle is bored for $\frac{1}{2}$ -inch round shank drills unless otherwise ordered.

SIZE AND PRICE

Fig. 741, No. 12, weight crated, 125 lbs.	\$10.00	Okgis
Chuck for Bit Stock Drills	1.00	Okgli

Boxed for Export

(4 drills). Net 460 pounds, gross 525 pounds, 238 kilos., 6 cubic feet

Silver's Mechanical Blower MOUNTED ON PIPE LEGS



Fig. 940 LT

- Fig. 940 LT—Silver's Mechanical Blower mounted on legs, complete with tuyere iron and pipe as shown in illustration above; diameter of fan, 10 inches; weight of tuyere 40 lbs.; weight complete 100 lbs.-----\$40.00 Okeen
- Fig. 940 L—Mounted on legs, but without tuyere or pipe---- 35.00 Okeip
- Fig. 940 PT—Unless otherwise ordered, Silver's Mechanical Blower is always furnished mounted on legs as shown above. When wanted, it can be mounted on pedestal with round base, as shown in illustration opposite, without extra charge. Weight 120 lbs.----- 40.00 Okeks
- Fig. 940 P—Mounted on pedestal, but without tuyere or pipe 35.00 Okghy

Silver's Mechanical Blower

MOUNTED ON PEDESTAL WITH ROUND BASE

The new Blower illustrated on this and the preceding page is so constructed as to produce a steady and powerful blast with very little energy. For the man who desires positive high-grade quality for every penny invested, this Mechanical Blower will give absolute satisfaction.

The fan is a masterful stroke of simplicity. It is in one piece, cut from heavy sheet steel and is perfectly balanced so as to produce maximum blast with trifling effort. The Fan is riveted to a steel hub in an almost unbreakable manner and mounted on steel shaft. The Fan case is cast in two pieces, bolted together.

The Gearing is of the Spur type, accurately cut from high-grade tool steel by the most modern gear cutting machinery. It is inclosed in an oil-tight cast iron case having removable face plate and provided with suitable dust-proof, self-closing oiler.

The "Oil-Bath" arrangement by which the gears revolve in and are constantly splashed with oil insures perfect lubrication for the high speed Fan Shaft and gearing bearings. This "Oil-Bath" feature together with the precise mesh of the gears results in an easy running mechanism and as nearly noiseless as it is possible for moving gears to be.

The Fan TURNS EITHER WAY. It makes 41 revolutions to every turn of the crank handle. This handle is adjustable for long or short turn. The entire Blower can be adjusted to different angles on the stand.

The top of gear case is 47 inches from floor.

A suitable tuyere iron and pipe, as shown in illustration, is provided with each machine.

Boxed for Export

Fig. 940 LT, net 110 pounds, gross 170 pounds, 77 kilos., 7 cubic feet

Fig. 940 PT, net 130 pounds, gross 200 pounds, 90 kilos., 8 cubic feet



Fig. 940 PT.

Silver's New Round Steel Rivet Forge WITH MECHANICAL BLOWER



Fig. 941

The neatness and symmetry of this steel rivet forge is only exceeded by its strong, easy-running and portable qualities.

The legs are of $\frac{3}{4}$ -inch pipe and are held by special 3-piece clamps at top and bottom, rigidly bolted together. The top clamp becomes a part of the solid cast tuyere pipe so placed that the blower mounted on one end perfectly counter balances the heavy fire pot with ash shaker and ash pit. As a result the forge stands very solid.

This is a most practical up-to-date forge for all ordinary smithing and riveting, or wherever light or medium work is to be done. It is light, stiff, and easy to handle.

It is used by railroads, bridge and tank builders, structural iron workers, railroad and street car line repair gangs, etc.

Ease of operation and strength of blast are features that recommend the Mechanical Blower used on this forge. It runs noiselessly.

The hearth is of the best sheet steel and is 18 inches in diameter. The knockdown feature of this forge commends it for easy transportation.

SIZE AND PRICES

Hearth—18 inches diameter.

Spread of Legs—32 inches.

Floor Space—33x38 inches.

Height from Floor—30 inches.

Diameter of Fan—10 inches.

Fig. 941 with shield, as shown, weight crated, 145 pounds—\$43.50 Okelf

Fig. 942 with open hood, similar to that shown on page 29,

weight crated, 150 lbs.----- 47.50 Okemm

Boxed for Export

Fig. 941, net 110 pounds, gross 170 pounds, 77 kilos., 7 cubic feet

Silver's New Portable Steel Forge WITH MECHANICAL BLOWER

This round steel forge is made in two sizes with hearth 22 inches and 24 inches in diameter, respectively, and with either open hood as shown here or with shield as on page 28. It is a light stiff tool, easily handled and extremely durable. A general all-purpose forge for all ordinary blacksmithing.

The hearth and shield or hood are of best sheet steel, solidly put together.

The tuyere pipe is cast solid with a special clamp for the legs, and forms a support at one end for the Mechanical Blower. The fire pot is heavy and has shaker, also ash outlet.

The legs are of $\frac{3}{4}$ -inch pipe, rigidly clamped in a special manner to insure a positive support.

The "oil-bath" close-mesh Mechanical Blower described on page 27 is a feature of this forge. It has a strong, steady blast and runs both easy and noiseless.

For railroad and street car line repair gangs, structural iron workers, bridge and tank builders, boiler, bicycle and automobile repairing, etc., this forge is well adapted. Its wide area gives it large capacity for work of all kinds in mines, on farms, or wherever light and medium forging is to be done. Can readily be knocked down into small space for convenience in moving from place to place. One man can handle it.



Fig. 944

SIZES AND PRICES

Height from Floor—30 inches.

Spread of Legs—32 inches. Diameter of Fan—10 inches.

Floor Space—Fig. 943 and 944, 36x41 inches; Fig. 945 and 946, 38x43 inches.

Fig. 944 with open hood, as shown, hearth 22 inches diameter, weight crated, 160 lbs.	\$54.00	Okepo
Fig. 946 with open hood, as shown, hearth 24 inches diameter, weight crated, 165 lbs.	57.50	Okesi
Fig. 943 with shield, otherwise same as Fig. 944, weight crated, 135 lbs.	47.50	Okeox
Fig. 945 with shield, otherwise same as Fig. 946, weight crated, 140 lbs.	52.00	Okerv

Boxed for Export

Fig. 943, net 110 pounds, gross 185 pounds, 84 kilos., 10 cubic feet

Fig. 945, net 120 pounds, gross 200 pounds, 90 kilos., 11 cubic feet

Silver's New Square Steel Forge WITH MECHANICAL BLOWER



Fig. 947

Whenever a light, stiff, portable forge with plenty of durability can be used, this steel forge commands instant attention. Its neatness of design is suggestive of the care taken to have every part of these forges made exactly right.

Extra heavy Angle Steel is used for the legs. These are further reinforced with $\frac{1}{2}$ x 1 inch steel strips, twisted as shown and riveted to the hearth. All unsteady motion or wobbling is eliminated.

The hearth and shield are of the best sheet steel, well and neatly put together. The hearth of Fig. 947 measures 24x24 inches inside and 6 inches deep. It has an angle-steel at rim as shown, with a wide dip for easy access to the fire.

The Tuyere Iron is cast with a heavy fire pot, and has ash shaker and ash pit as shown. It confines the blast, holds the heat, produces a very hot fire and heats iron very quickly.

Silver's New Spur Geared Mechanical Blower, fully described on page 27, is a regular part of the equipment of this forge as shown above. The crank turns either way to make the blast.

This steel forge, on account of its compactness and efficiency, is especially recommended for garage work, and indoor repair work of all kinds. It is also designed and adapted for the use of boilermakers, blacksmiths, contractors, miners, and prospectors; for builders of tanks and bridges, and for elevated and steam railroad construction and repair gangs, etc., in fact wherever lightness, durability and portability are an advantage.

SIZES AND PRICES

Hearth—24x24 inches; 6 inches deep,
Diameter of Fan—10 inches.

Height from Floor—30 inches.
Floor Space—31x39 inches.

Fig. 947 with shield as shown, weight crated, 205 lbs.	\$56.50	Okeuz
Fig. 948 with open hood, similar to that shown on page 31, weight crated, 215 lbs.	63.00	Okewy

Boxed for Export

Fig. 947, net 160 pounds, gross 260 pounds, 118 kilos., 8 cubic feet

Silver's New Square Steel Forge

WITH
MECHANICAL
BLOWER

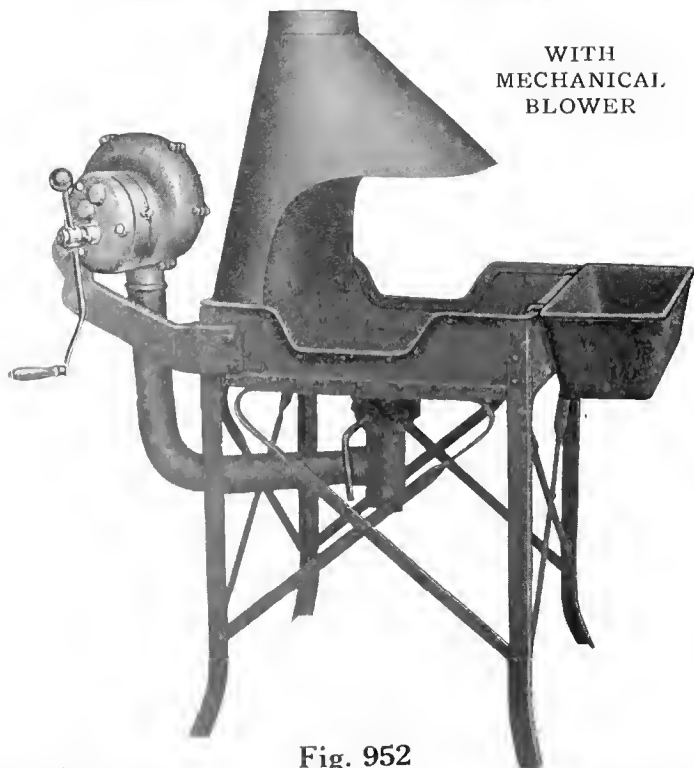


Fig. 952

The structural steel construction of Fig. 952 secures that lightness, stiffness and durability so desirable in a portable Forge adapted for every kind of inside or outside smithing. Especially is it recommended for structural building work, where frequent moving from place to place is not only convenient, but necessary. This forge means largely increased output for horse-shoers and blacksmiths.

The Blower is the new spur geared Mechanical Blower described fully on page 27. It is well to recall its quiet, easy running qualities, due to the precise mechanical construction used throughout, also that the handle turns in either direction.

Best sheet steel is used for hearth and shield and it is rigidly put together. The hearth is 30x30 inches inside, and 6 inches deep. The wide dip in the side gives easy access to the fire.

The legs are of extra heavy angle steel reinforced with $\frac{3}{4}$ x1 inch steel strips, twisted as shown, and riveted to the hearth, so that the forge stands solid and steady.

The Tuyere Iron confines the blast and holds the heat, producing a hot, concentrated fire.

SIZES AND PRICES

Hearth—30x30 inches, 6 inches deep.	Height from Floor—30 inches.
Diameter of Fan—10 inches.	Floor Space—37x45 inches.
Fig. 950 with shield, similar to that shown on page 30,	
weight crated, 240 lbs.	\$75.00 Okeyb
Without Water Tank, \$68.50.	
Fig. 952 complete with hood and water tank as shown,	
weight crated 295 lbs.	82.00 Okeza
Without Water Tank, \$75.50.	
Boxed for Export	
Fig. 950, net 180 pounds, gross 280 pounds, 127 kilos., 10 cubic feet	

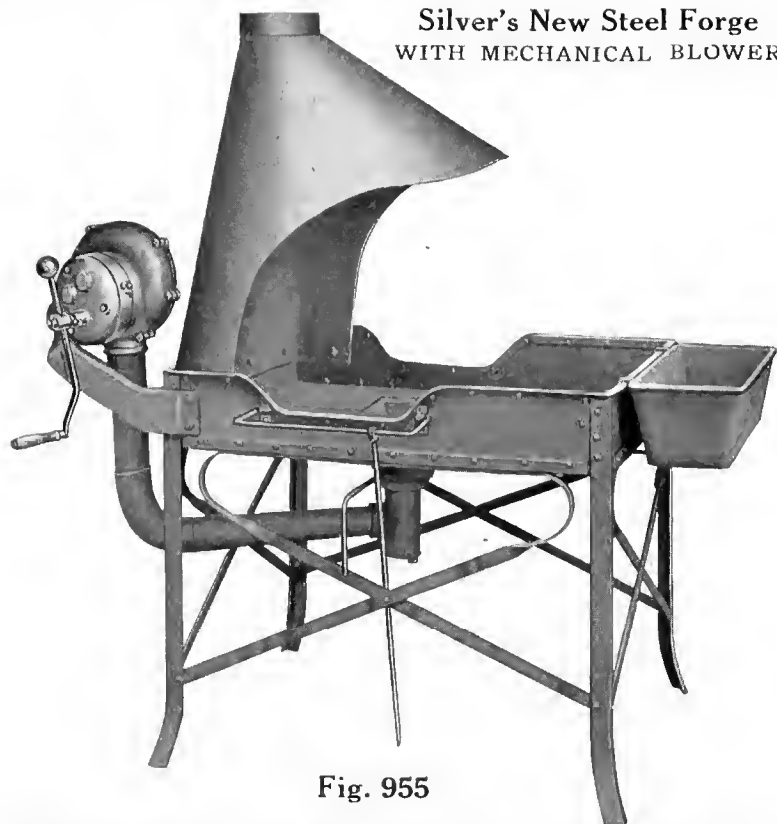


Fig. 955

This Forge is massive only in its strength, symmetry and utility—its easy portability is one of its surprising features.

Its substantial construction is such that it will stand up under the wear and tear of the shop indefinitely.

A continuous strip of steel riveted to the hearth on all sides is used to bind the angle steel legs rigidly together, bracing them firmly to stand the rough usage of outdoor work.

The large roomy fire pan with lowered sides opposite the fire place adapts it to general heavy blacksmith and horseshoeing work of all kinds, as well as for the general run of work on elevated roads, street car lines and railroads, in heavy wagon shops, implement works, etc.

The Tuyere iron with shaker and outlet for ashes is a part of this forge and the blast is produced by Silver's noiseless Mechanical Blower with special features as previously described.

As listed, this forge is furnished in two sizes with open hood as shown, and with or without the cast removable water tank.

Dimensions—Height from floor, 30 inches; diameter of fan, 10 inches; floor space, 37x51 inches; hearth 6 inches deep.

SIZES AND PRICES

Fig. 955 with open hood and water tank, as shown, hearth 30x40 inches, weight crated, 325 lbs.	\$95.00	Okgej
Without Water Tank, \$88.50.		
Fig. 953 with open hood and water tank as shown, hearth 30x36 inches, weight crated, 300 lbs.	\$88.00	Okgan
Without Water Tank, \$81.50.		

Silver's 4-Leg Agricultural Lever Forge

We have recently made a new and important addition to our line of portable forges, viz.: The Agricultural Lever Forge. These have been designed especially to meet the demand for a good, substantial all-round portable forge at a low price. The large sale of these forges is the best evidence of their popularity as regards service and price.

We now offer our patrons all the advantages of a selection from a large assortment.

The accompanying cut represents our 4-leg Agricultural Lever Forge with shield. It is also made with hood as listed below and as shown on page 34.

This forge is very strong and durable, for although low in price, these qualities have not been sacrificed to make it so.

It is neat and symmetrical in design, and is made of cast iron with $\frac{3}{4}$ -inch pipe legs, which are firmly screwed into the hearth and are tied together with wrought iron bands to insure rigidity when in action.

The lever operates a segment gear on a ratchet, which permits the reverse motion while the drive wheel on the same shaft revolves rapidly. A leather belt connects the drive wheel with the blower fan. The result is that a strong lasting blast is procured with very little energy.

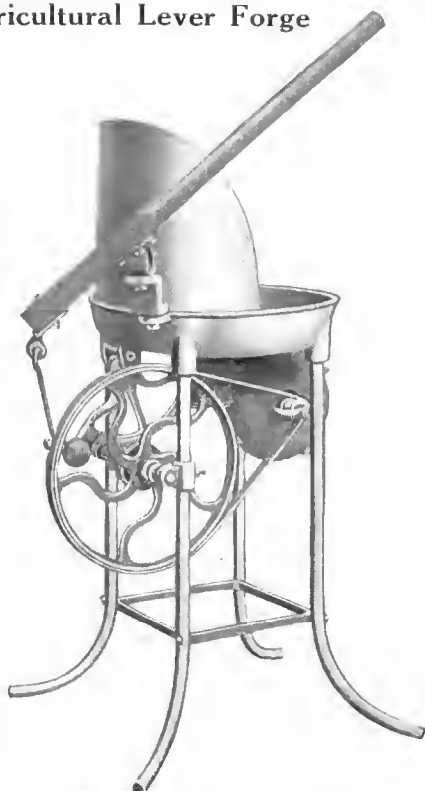


Fig. 930, with Shield

These Agricultural Lever Forges are adapted for all kinds of farm work or other general repairing up to their capacity.

SIZES AND PRICES

Height of Forge—30 inches.
Diameter of Hearth—18 inches, $3\frac{1}{4}$ inches deep.
Diameter of Fan Case—8 inches.
Floor Space over all—20x23 inches.

Fig. 930, No. 5. With shield as shown, shipping weight

75 pounds

\$14.00

Okapu

Fig. 931, No. 5. With open hood, shipping weight 80 lbs. 16.00

Okare

Boxed for Export

Fig. 931—Net 80 pounds, gross 145 pounds, 66 kilos., 6 cubic feet (4 Forges). Net 320 pounds, gross 400 pounds, 272 kilos., 9 cubic feet

Fig. 930—Net 75 pounds, gross 125 pounds, 57 kilos., 3 cubic feet (4 Forges). Net 300 pounds, gross 380 pounds, 172 kilos., 8 cubic feet

Silver's 3-Leg Agricultural Lever Forge

The accompanying cut represents our new 3-leg Agricultural Lever Forge with hood. It is also made with shield similar to that shown on page 33. These forges were designed to meet the demand for a good, substantial all-round portable forge at a low price.

They are neat and symmetrical in design, and are made of cast iron, with $\frac{3}{4}$ -inch pipe legs, which are firmly screwed into the hearth and are tied together with wrought iron bands to insure rigidity when in action.

The lever operates a segment gear on a ratchet, which permits the reverse motion while the drive wheel on the same shaft revolves rapidly. A leather belt connects the drive wheel with the blower fan. The result is that a strong lasting blast is produced with very little energy.

These forges are low in price, but their strength and durability have not been sacrificed to make them so. They are adapted for all kinds of farm work or other general repairing up to their capacity.

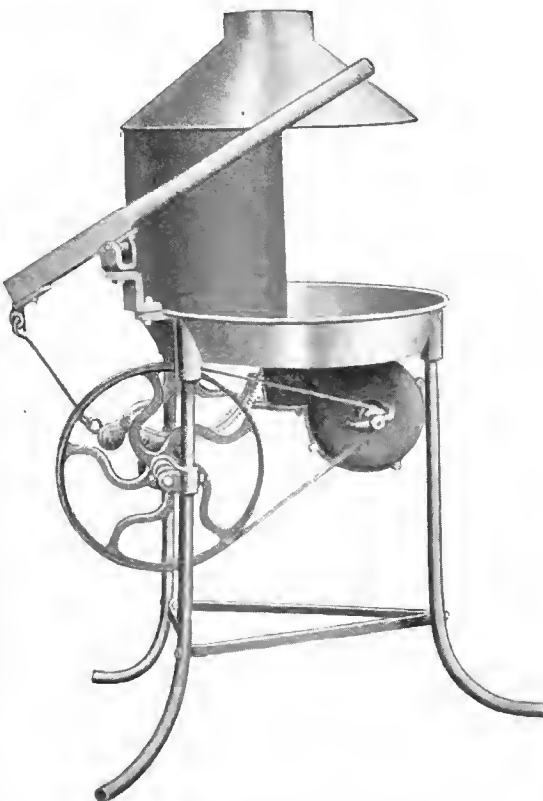


Fig. 936, with Hood

SIZES AND PRICES

Height of Forge—30 inches.

Diameter of Hearth—22 inches, $3\frac{1}{4}$ inches deep.

Diameter of Fan Case—8 inches.

Floor Space Over All—22x34 inches.

Fig. 936, No. 10, with open hood as shown, shipping weight, 95 pounds

\$18.00

Okauv

Fig. 935, No. 10, with shield, shipping weight 90 pounds

16.00

Okatt

Boxed for Export

Fig. 936—Net 95 pounds, gross 165 pounds, 75 kilos., $6\frac{1}{4}$ cubic feet (4 Forges). Net 380 pounds, gross 490 pounds, 222 kilos., 13 cubic feet

Fig. 935—Net 90 pounds, gross 165 pounds, 75 kilos., 5 cubic feet (4 Forges). Net 340 pounds, gross 465 pounds, 210 kilos., 11 cubic feet

Silver's Agricultural Crank Forge



Fig. 901, with Shield

This forge is substantially constructed and is positive in action, being driven by means of a crank and sprocket chain to an intermediate wheel, and from there to the fan wheel by belt.

It is symmetrical in design and has pipe legs, which are tied together at bottom, thus making it stand steady while in action.

It is manufactured on mechanical lines, the high speed bearings being babbitted and the others lored, all of them being properly fitted and ample provision made for keeping them oiled.

The fire place is separate from the hearth, which avoids breakage of these parts on account of the shrinkage and expansion.

It is adapted to general farm work and for all kinds of repairing up to its capacity.

SIZES AND PRICES

Height of Forge—30 inches.

Size of Hearth—18 inches diameter, 2½ inches deep.

Size of Fan Case—7¾ inches diameter.

Floor Space Over All—25x30 inches.

Fig. 901, No. 4, with shield as shown, weight crated, 75 pounds	\$15.00	Okayd
Fig. 902, No. 4, with open hood similar to that shown on page 36, weight crated, 80 pounds	17.00	Okbit

Boxed for Export

Fig. 901—Net 65 pounds, gross 125 pounds, 57 kilos., 3¾ cubic feet (3 Forges). Net 200 pounds, gross 280 pounds, 127 kilos., 7 cubic feet
 Fig. 902—Net 70 pounds, gross 130 pounds, 59 kilos., 3¾ cubic feet (3 Forges). Net 210 pounds, gross 310 pounds, 142 kilos., 8 cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

The construction of this forge is substantial and on lines that make it light running and positive in action.

The clutch is of special design and is positive in action and economical in point of service and wear.

It has pipe legs which give strength and symmetry. The legs are fastened on in a substantial manner so that they don't wobble.

The lever support is a swivel, which permits the lever to follow the motion of the arm while in use.

The boxes are provided with oil cups and the shafts are correctly fitted into the bearings, and if these parts are properly lubricated they will last a lifetime. The oil cups are dust proof and self-closing.

The shaft that attains speed—the fan shaft—is provided with ball bearings which lighten the draft and save wear.

The fire place is separate from the hearth, which saves breakage in expansion and shrinkage of these parts.

They are recommended for black smiths, repairmen, quarrymen, boilermakers, bridge builders, in mines, on farms, and every place where light smithing is done.

Will heat iron 1½ inches diameter to welding heat.



Fig. 904

SIZES AND PRICES

Height of Forge—30 inches.

Size of Hearth—18 inches diameter.

Size of Fan—9 inches diameter.

Floor Space Over All—25x36 inches.

Fig. 910, No. 3, with shield similar to that shown on page 35,

weight crated, 95 pounds.....\$22.00

Okbri

Fig. 904, No. 3, with open hood as shown above, weight

crated, 100 pounds.....24.00

Okbus

Fig. 904, No. 3, with closed hood, weight crated, 110 pounds 26.00

Okday

Boxed for Export

Fig. 904, with open hood—Net 95 pounds, gross 175 pounds, 79 kilos., 6½ cubic feet

(4 Forges). Net 380 pounds, gross 450 pounds, 204 kilos., 10 cubic feet

Fig. 910—Net 90 pounds, gross 130 pounds, 57 kilos., 4½ cubic feet

(1 Forges). Net 360 pounds, gross 430 pounds, 195 kilos., 10 cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

The design and construction of this forge is on mechanical and symmetrical lines, resulting in a strong, light-running, economical tool.

The legs are of pipe, giving strength and symmetry. They are firmly screwed into hearth and tied together in a manner to prevent their wobbling.

The lever, supported on a swivel, follows the motion of the arm while in use.

The clutch is of a special design that insures positive action.

The boxes are provided with oil cups and the shafts are correctly fitted into the bearings. If these parts are properly lubricated they will last a life-time. The oil cups are dust proof and self-closing.

The shaft that attains speed—the fan shaft—is provided with ball bearings which lighten the draft and save wear.

The fireplace is separate from the hearth which saves breakage in expansion and shrinkage of these parts.



Fig. 915

It is recommended for blacksmith's, repairmen, quarrymen, boilermakers, bridge builders, in mines, on farms, and every place where light and medium smithing is done.

Will heat iron 2 inches diameter to welding heat.

SIZES AND PRICES

Height of Forge—30 inches.

Size of Fan—9 inches diameter.

Size of Hearth—22 inches diameter.

Floor Space Over All—24x36 inches

Fig. 915, No. 2½, with shield as shown, weight crated, 115 pounds

\$24.00

Okdeh

Fig. 905, No. 2½, with open hood similar to that shown on page 36, weight crated, 125 pounds

27.00

Okdiw

Boxed for Export

Fig. 915—Net 110 pounds, gross 165 pounds, 75 kilos., 5 cubic feet

(2 Forges). Net 225 pounds, gross 310 pounds, 141 kilos., 7 cubic feet

Fig. 905—Net 105 pounds, gross 175 pounds, 79 kilos., 6½ cubic feet

(2 Forges). Net 240 pounds, gross 330 pounds, 150 kilos., 11 cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

This forge is large and roomy and has a strong blast, which adapts it to the requirements of horseshoers, boilermakers, bridge builders and general smithing.

The clutch is of special design and is positive in action and economical in point of service and wear.

The legs are wrought pipe and are held in sockets which are bolted to bottom of hearth; the legs are braced by heavy iron rods running diagonally and held rigidly by clamp at point where they cross.

The lever support is a swivel, which permits the lever to follow the motion of the arm while in use.

The boxes are provided with oil cups and the shafts are correctly fitted into the bearings, and if these parts are properly lubricated they will last a lifetime. The oil cups are dust proof and self-closing.

The fan shaft is provided with ball bearings, which lighten the draft and save wear.

The fireplace is separate from hearth, which saves breakage in expansion and shrinkage of these parts.

These points make a strong, durable, light running forge, and one that is capable of most any kind of smithing. Will heat iron 3 inches diameter to welding heat.

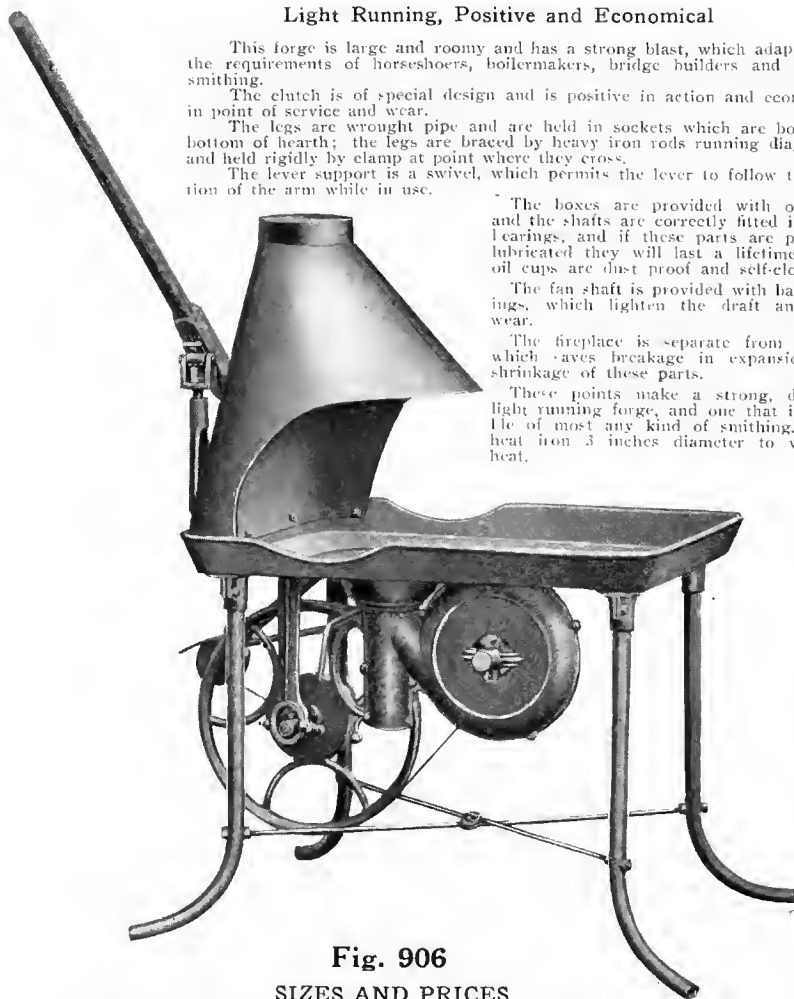


Fig. 906

SIZES AND PRICES

Height of Forge—30 inches.

Size of Hearth—24x35½ inches.

Size of Fan—12 inches diameter.

Floor Space Over All—47x58 inches

Fig. 906, No. 2, with open hood, as shown, weight crated, 220

pounds

\$40.00

Okdro

Fig. 920, No. 2, with shield, weight crated, 210 pounds.-----\$36.00

Okdos

Boxed for Export.

Fig. 906. Net 175 pounds, gross 305 pounds, 138 kilos., 10 cubic feet

Fig. 920. Net 170 pounds, gross 250 pounds, 113 kilos., 9 cubic feet

Silver's Portable Forge

This is a large size forge of new design. The hearth measures $29\frac{1}{2}$ inches wide its entire length and is $46\frac{1}{2}$ inches long. Instead of having a small coal box built in the end of the hearth, the bottom is made straight and the sides are increased in height, which provides ample room for a good supply of coal. The bottom being straight the coal is easily drawn into the fire by means of the rake or shovel. There is also ample room for tools and material.



Fig. 925

Other good features of this forge are the swivel lever support, the boxes, that are provided with dust-proof, self-closing oil cups; the ball-bearing, high speed fan shaft, which lightens the draft and saves wear; and the fireplace, which is separate from the hearth, avoiding bad results due to expansion and shrinkage of these parts.

The design of the forge is symmetrical throughout, and is also practical. It is a very substantial tool, and is adapted to all kinds of smithing up to heating iron 3 inches in diameter to welding heat.

SIZES AND PRICES

Height of Forge—30 inches.
Size of Fan—15 inches.

Size of Hearth— $29\frac{1}{2} \times 46\frac{1}{2}$ inches.
Floor Space Over All— 55×58 inches

Fig. 907, No. 1, with open hood, without water tank, weight		
crated, 325 pounds	\$50.00	Okdut
Fig. 925, No. 1, complete, with hood and water tank, weight		
crated, 360 pounds	\$55.00	Okdwu

Boxed for Export

Fig. 907—Net 285 pounds, gross 400 pounds, 181 kilos, 13 cubic feet.
Fig. 925—Net 335 pounds, gross 440 pounds, 199 kilos, 13 cubic feet.

Silver's Improved Power Band Saw

20-Inch Iron Band Wheels

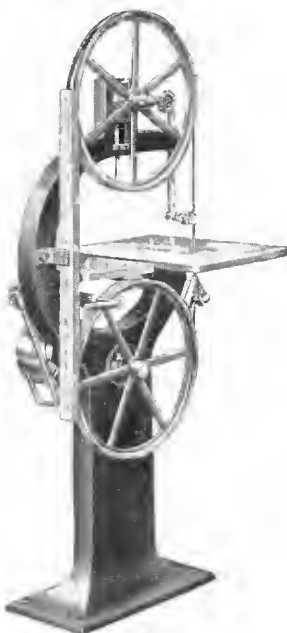


Fig. 720

SIZE AND PRICE

20-inch machine, with tight and loose pulleys, weight crated		
390 pounds -----	\$50.00	Ojhuj
Extra saw blades, 10 feet 5 inches x $\frac{1}{4}$ inch, each-----	1.15	Ojiri
Wright's patent non-friction roller saw-guide, extra list--	6.00	Ojius

Baxed for Export

Net 360 pounds, gross 500 pounds, 227 kilos., 15 cubic feet.

DESCRIPTION OF FIG. 720

See Illustration on Opposite Page

Band Saws are very much alike in the work they perform, but there is a vast difference in their durability and convenience of operation. The recent extensive improvements on our 20-inch band saw include the latest time and labor-saving attachments, among which we mention—

A new iron table, planed perfectly smooth, which cannot warp, as do wooden tables.

A belt shifter that can be used either above or below pulleys. It is within easy reach of operator's left hand, instead of low down under table.

A handsomely designed frame that rests on floor all around, insuring solidity and cleanliness.

An upper wheel adjustment on same side of machine as the operator when at work.

The up-and-down adjustment of the upper wheel is below, instead of above, said wheel, and may be conveniently reached by the operator, without changing his position.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims. Upper wheel has up-and-down adjustment of several inches.

The table on our 20-inch saw can be tilted, for angle sawing, up to 45° by loosening a nut with an attached lever and can be firmly locked when desired.

DIMENSIONS OF 20-INCH SAW

Wheels—20½ inches diameter, 1⅝-inch face.

Size of table—18x22 inches.

Size of base—11½x23 inches.

Pulleys—7x3; 3-inch belt.

Saw blade—10 feet 5 inches long; ¼ inch wide.

Floor space—24x30 inches.

Distance between saw and frame—20½ inches.

Height under saw guide when raised—9 inches.

Height over all—67 inches.

Power required—one to two horse.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Two plain guides, brazing clamp and tongs, piece brazing material and one blade, ¼ inch wide, ready for use.

Silver's Planetary Foot Power Band Saw

20-Inch Iron Band Wheels.

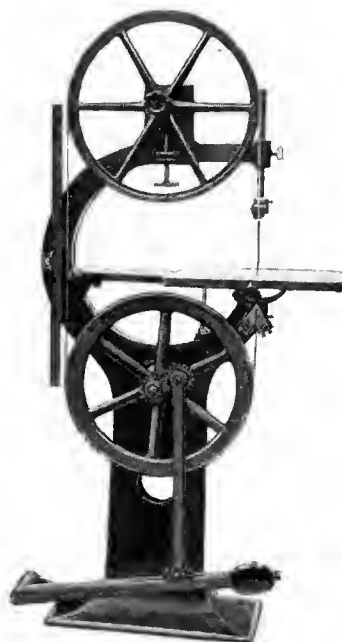


Fig. 721

SIZE AND PRICE

20-inch machine, foot power only, weight crated, 410 pounds_	\$55.00	Ojkad
Extra saw blades, 10 feet 5 inches x $\frac{1}{4}$ inch, each_	1.15	Ojiri
Wright's patent non-friction roller saw guide, extra list_	6.00	Ojius

Boxed for Export

Net 360 pounds. gross 500 pounds, 227 kilos., 15 cubic feet.

DESCRIPTION OF FIG. 721

Illustrated on Opposite Page.

The illustration on opposite page shows our new 20-inch Foot Power Band Saw, which embodies some splendid improvements. The table is of iron, planed perfectly smooth and can be tilted for angle sawing up to 45 degrees by loosening a nut with an attached lever. It can be firmly locked where desired. The entire frame is in one piece, cored out. It is heavy and symmetrical and the base rests on floor all around, insuring solidity and cleanliness. The operator can conveniently control upper wheel adjustment, saw guide, tension of saw blade and tilting of table, without changing position at saw.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims.

The foot power mechanism on this machine is a decidedly novel as well as valuable feature. It is entirely of metal. The illustration will show at a glance the marvelous improvement over the usual complicated construction.

As indicated in the picture, two gears, of similar size and connected by links, are employed. One gear is keyed direct to the lower wheel shaft. The other, or drive gear, is attached to the upright pedal arm and cannot revolve itself except in a circle around the circumference of the first, whose revolutions it thereby increased twofold. In other words, for every complete movement of the pedal the band wheel revolves twice and the saw blade moves 25 feet.

The simplicity of this device as applied to band saws is at once apparent. There is absolutely nothing to get out of order and the neat appearance of the machine is greatly enhanced.

Extremely light running—a feature that will appeal strongly to those requiring a foot-power or light-power machine. The simple, direct planetary motion utilizes every ounce of power generated—and the amount needed is surprisingly low.

The length of stroke is readily adjustable to suit the operator.

DIMENSIONS OF FIG. 721

Wheels—20½ inches diameter, 1¾-inch face.

Size of table—18x22 inches.

Size of base—11½x23 inches.

Gear wheels—3¼ inches diameter.

Shafting—1-inch steel.

Saw blade—10 feet 5 inches long; ¼ inch wide.

Floor space—24x30 inches.

Distance between saw and frame—20½ inches.

Height under saw guide when raised—9 inches.

Height over all—67 inches.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Two plain guides, brazing clamp and tongs, piece brazing material and one blade, ¼ inch wide, ready for use.

Silver's Planetary Combination Foot and Belt Power Band Saw

20-Inch Iron Band Wheels



Fig. 722

20-inch machine, combined foot and belt power, weight crated, 440 pounds -----	\$60.00	Ojkep
Extra saw blades, 10 feet 5 inches \times $\frac{1}{4}$ inch, each-----	1.15	Ojiri
Wright's patent non-friction roller saw guide, extra list----	6.00	Ojius

Boxed for Export

Net 405 pounds, gross 550 pounds, 250 kilos., 15 cubic feet.

DESCRIPTION OF FIG. 722

Illustrated on Opposite Page

Simplicity and light running qualities of our new combined foot and belt power hand saw stand right out so you cannot help seeing them.

The machine is provided with tight and loose pulleys as shown and with belt shifter that can be used either above or below pulleys, insuring a sure shift under any conditions.

The foot power mechanism is entirely of metal, and is a marvelous improvement over the ordinary complicated construction. It is both novel and valuable.

Two gears are employed, as the picture indicates; they are of similar size and connected by links. One gear is keyed direct to the lower wheel shaft. The other, or drive gear, is attached to the upright pedal arm and cannot itself revolve except in a circle around the circumference of the first, whose revolutions it thereby increases two-fold. In other words, for every complete movement of the pedal the hand wheel revolves twice and the saw blade moves 25 feet.

The simplicity of this device as applied to hand saws is at once apparent. There is absolutely nothing to get out of order and the neat appearance of the machine is greatly enhanced.

The extremely light running features of this saw will appeal to those requiring a foot-power or light-power machine. The simple, direct planetary motion utilizes every ounce of power generated—and the amount needed is surprisingly low.

The operator can readily adjust the length of stroke to suit.

The table of the machine is of iron, planed perfectly smooth and can be tilted for angle sawing up to 45 degrees by loosening a nut with an attached lever. It can be firmly locked where desired. The entire frame is in one piece, cored out. It is heavy and symmetrical and the base rests on the floor all around, insuring solidity and cleanliness. The operator can conveniently control upper wheel adjustment, saw guide, belt shifter, tension of saw blade and tilting of table, without changing position at saw.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims.

DIMENSIONS OF FIG. 722.

- Wheels**—20½ inches diameter, 1⅝-inch face.
- Size of table**—18x22 inches.
- Size of Base**—11½x23 inches.
- Pulleys**—7x3 inches; 3-inch belt.
- Gear wheels**—3¼ inches diameter.
- Shafting**—1-inch steel.
- Saw blade**—10 feet 5 inches long; ¼ inch wide.
- Floor space**—24x30 inches.
- Distance between saw and frame**—20½ inches.
- Height under saw guide when raised**—9 inches.
- Height over all**—67 inches.
- Power required**—one to two horse.
- Speed to run**—300 to 400 revolutions per minute.

Regular Equipment—Two plain guides, brazing clamp and tongs, piece brazing material and one blade, ¼ inch wide, ready for use.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide



Fig. 820

26-Inch Iron Band Wheels

SIZE AND PRICE

26-inch machine, with tight and loose pulleys, weight crated, 700 pounds -----	\$80.00	Ojkiz
Extra saw blades, 13 feet 9 inches x $\frac{3}{8}$ inch, each -----	1.45	Ojkow
Extra for ripping gauge -----	8.00	Ojkur

Boxed for Export

Net 615 pounds, gross 830 pounds, 376 kilos., 30 cubic feet.

DESCRIPTION OF FIG. 820

See Illustration on Opposite Page

The general construction and design of our 26-inch, 32-inch and 36-inch Band Saws is very much the same; consequently aside from the difference in size and capacity, a description of one covers the three sizes.

While every part is worthy of mention, we will only refer to the special time and labor-saving features in the recent improvements. They include—

A new frame design, handsome in appearance, that rests on the floor on all sides, thus giving added strength and solidity and insuring cleanliness around the machine.

A new patented device for the table for angle sawing. A turn of a hand wheel loosens or rigidly fastens the table at any desired angle up to 45°.

A new belt shifter that can be used either above or below pulleys, making the shift a certainty no matter from what direction power is applied.

Instead of being low-down under the table, the shifter is now within easy reach of the operator's left hand and can be instantly fastened where desired by a turn of a thumb screw.

The position of the upper wheel adjustment has been changed, so that the operator can conveniently reach same while at work.

Rubber bands are securely cemented to the rims of wheels, which are turned true and perfectly balanced. Upper wheel has up-and-down adjustment of several inches, and is provided with spring tension which acts as a cushion for saw blade.

DIMENSIONS OF 26-INCH SAW

Wheels—26½ inches diameter, 1½-inch face.

Size of table—22x26 inches

Size of base—13½x28 inches.

Pulleys—10x3 inches; 3-inch belt.

Saw blade—13 feet 9 inches long; ¾ inch wide.

Floor Space—30x40 inches.

Distance between saw and frame—26½ inches.

Height over saw guide when raised—10½ inches.

Height over all—79 inches.

Power required—1½ to 2 horse.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Wright's Guide above table, plain guide below table, brazing clamp and tongs, brazing material and one ¾-inch blade ready for use. Choice of any width blade up to one inch.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

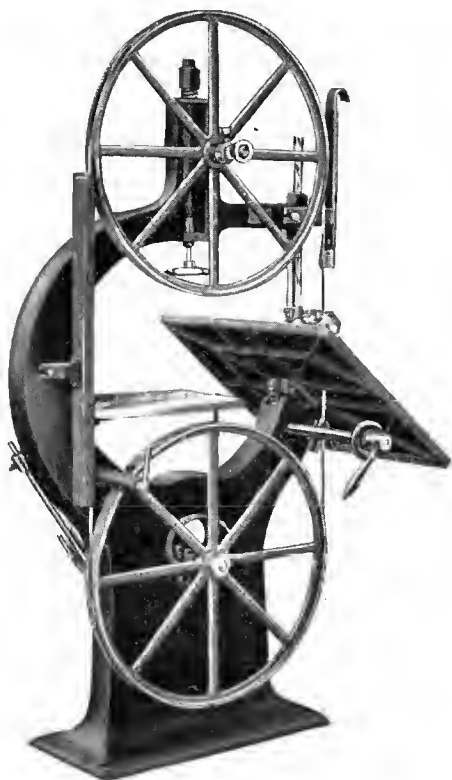


Fig. 822

32-Inch Iron Band Wheels

SIZES AND PRICES

32-inch machine, with tight and loose pulleys, weight crated, 990 pounds	\$105.00	Ojkyg
Extra saw blades, 16 feet 4 inches x $\frac{1}{2}$ inch, each	1.80	Ojlas
Extra for ripping gauge	8.00	Ojlet

See page 52 for illustration and price of this machine
equipped with wood rim wheels.

Boxed for Export

Net 855 pounds, gross 1135 pounds, 515 kilos., 40 cubic feet.

DESCRIPTION OF FIG. 822

See Illustration on Opposite Page

Our 32-inch Band Saw has the same new, handsome, symmetrical frame and the same valuable improvements that are features of the others of our line. The most important of these alterations is the new tilting device for angle sawing, whereby the table can be loosened or rigidly fastened in any desired position, by a turn of a hand wheel.

The other changes have been made principally for the purpose of simplifying the operation of the machine, by bringing all controlling or operating levers within convenient reach of the operator.

The belt shifter can be used either above or below pulleys. It is within easy reach of the operator's left hand, instead of low down under table.

The operator can adjust the upper wheel from his position at the machine while the latter is running, and also has full control of the up-and-down adjustment of upper wheel from the same position.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims. Upper wheel has up-and-down adjustment of several inches, and is provided with spring tension which acts as a cushion for saw blade.

See page 52 for illustration and price of this machine, with wood rim wheels.

DIMENSIONS OF 32-INCH SAW

Wheels—32½ inches diameter; 1¾-inch face.

Size of table—25½x31 inches.

Size of base—16x32 inches.

Pulleys—12x3½ inches, 3½-inch belt.

Saw blade—16 feet 4 inches, ½ inch wide.

Floor space—35x48 inches.

Distance between saw and frame—32½ inches.

Height under saw guide when raised—13 inches.

Height over all—86 inches.

Power required—Two to three horse.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Wright's Guide above table, plain guide below table, brazing clamp and tongs, brazing material and one ½-inch blade ready for use. Choice of any width blade up to one inch.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

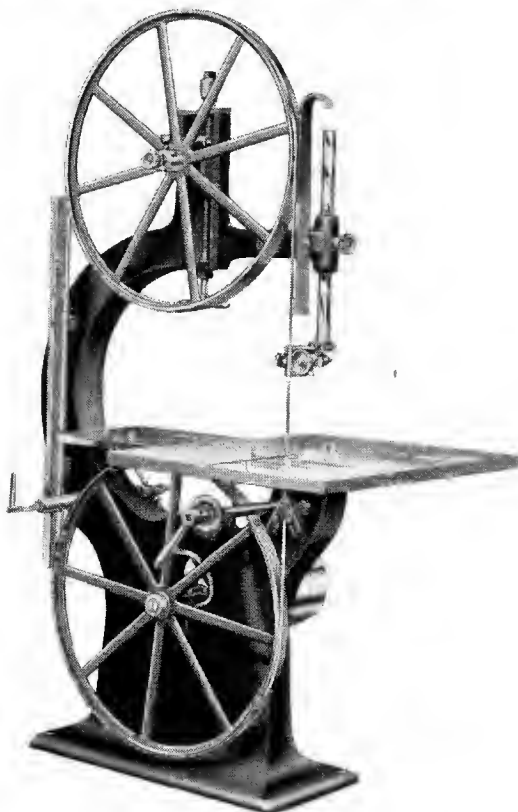


Fig. 824

36-Inch Iron Band Wheels

SIZE AND PRICE

36-inch machine, with tight and loose pulleys, weight crated,	
1390 pounds -----	\$130.00
Extra saw blades, 18 feet 6 inches x $\frac{3}{4}$ inch, each -----	2.30
Extra for ripping gauge -----	10.00

Ojloy
Ojmeg
Ojmib

See page 53 for illustration and price of this machine
equipped with wood rim wheels.

Boxed for Export

Net 1195 pounds, gross 1520 pounds, 685 kilos, 54 cubic feet.

DESCRIPTION OF FIG. 824

See Illustration on Opposite Page.

Aside from one or two changes tending toward greater strength and solidity, and a more attractive appearance, all of the alterations on our 26, 32 and 36-inch saws have been for the purpose of making them the most conveniently operated machines on the market. Extreme simplicity marks every step.

The operator now makes no unnecessary moves, for he can shift the belt, adjust upper wheel, tighten the saw, lower or raise the guide and tilt the table without changing his position at saw.

Most of these changes are apparent in the illustration.

The operation of the new patented tilting mechanism is wonderfully simple. The table itself is attached to a segment, which is worked by a pinion on the crank or handle shaft, and a small hand wheel on this shaft serves to loosen or rigidly fasten the table at any desired angle up to 45°.

The belt shifter can be used either above or below the pulleys, insuring certainty in the shift, regardless of the direction from which the power is applied.

The new shape of the frame not only increases the strength of the machine but also gives it greater capacity.

The new base, resting on the floor all round, prevents the accumulation of dirt.

Wheels turned true and perfectly balanced, with rubber band securely cemented to face of same; a spring tension as a cushion for saw, and a balance weight for saw guide—these and other details are incidental but important features.

See page 53 for illustration and price of this machine equipped with wood rim wheels.

DIMENSIONS OF 36-INCH SAW

Wheels—36½ inches diameter; 2-inch face.

Size of table—31x38 inches.

Size of base—18x39 inches.

Pulleys—12x4 inches, 4-inch belt.

Saw blade—18 feet 6 inches, ¾ inch wide.

Floor space—39x57 inches.

Distance between saw and frame—36½ inches.

Height under saw guide when raised—16 inches.

Height over all—93 inches.

Power required—2½ to 4 horse.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Wright's Guide above table, plain guide below table, brazing clamp and tongs, brazing material and one ¾-inch blade ready for use. Choice of any width blade up to one inch.

Silver's Improved Power Band Saw

With Wrights Patent Non-Friction Roller Saw Guide

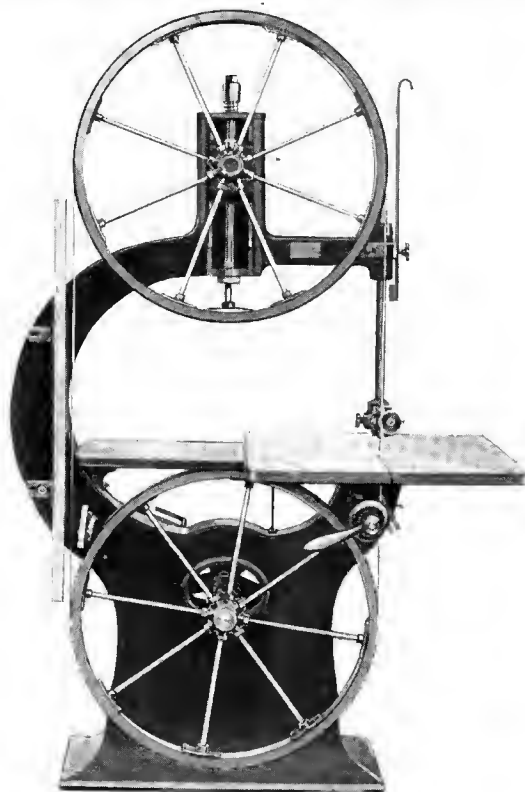


Fig. 823

32-Inch Wood Rim Band Wheels

This machine meets the demand of those who prefer wood rim to iron wheels. Aside from this feature, the description and dimensions on page 49 apply to this machine.

SIZE AND PRICE

32-inch machine, with tight and loose pulleys, weight crated,		
915 pounds	\$113.00	Ojmun
Extra saw blades, 16 feet 4 inches x ½ inch, each	1.80	Ojlas
Extra for ripping gauge	8.00	Ojlet

Box for Export

Net 830 pounds, gross 1110 pounds, 503 kilos, 40 cubic feet.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

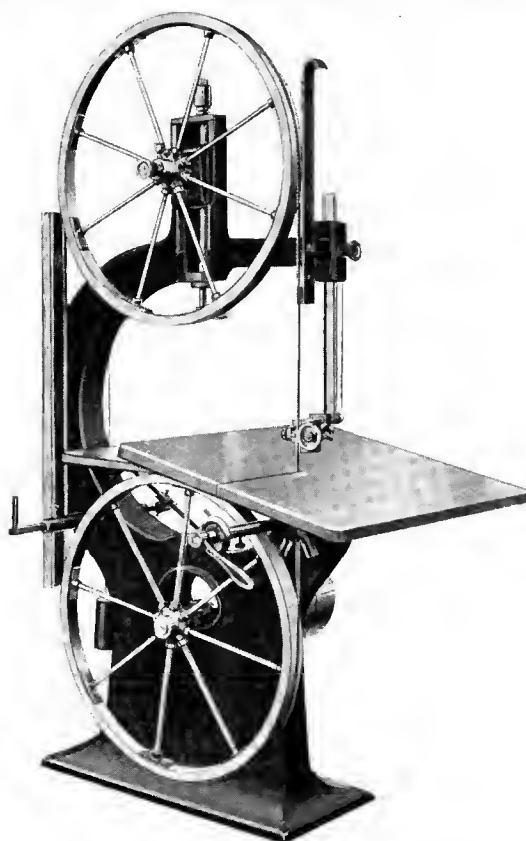


Fig. 825

36-Inch Wood Rim Band Wheels

The wood rim wheels of this machine are accurately balanced and were designed to meet the demand of those who prefer wood rim to iron wheels. Otherwise the dimensions and description on page 51 apply.

SIZE AND PRICE

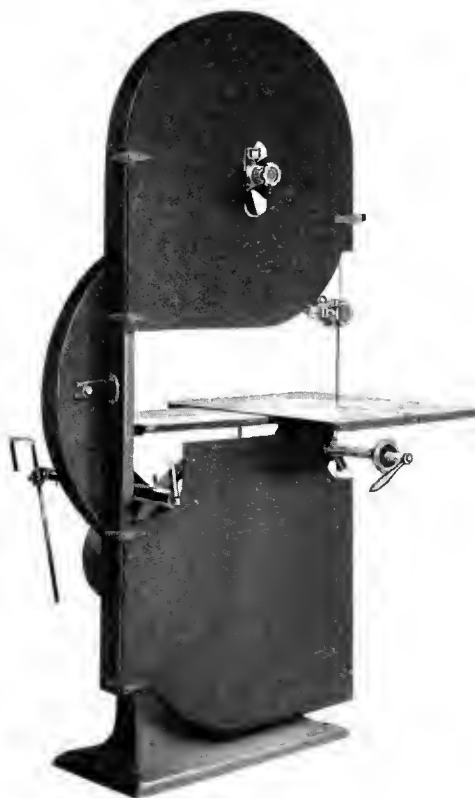
36-inch machine, with tight and loose pulleys, weight crated,		
1275 pounds -----	\$138.00	Ojmod
Extra Saw blades, 18 feet 6 inches x $\frac{3}{4}$ inch, each -----	2.30	Ojmeg
Extra for ripping gauge -----	10.00	Ojmib

Boxed for Export

Net 1170 pounds, gross 1500 pounds, 673 kilos., 54 cubic feet,

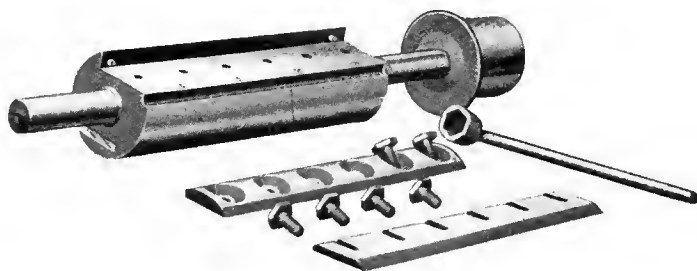
Silver's Improved Power Band Saws

Showing New "Safety First" Steel Guard



We are prepared to furnish suitable steel guards as shown above, for all sizes of our Band Saws, at slight additional cost. These guards make the machine practically "fool-proof," so far as accidents to operator are concerned. They meet all "safety first" factory inspection laws, yet leave all controlling or operating parts readily accessible to operator. To insure proper fit, these guards should be ordered with machine when desired.

Silver's Round Safety Cylinder for Fig. 890 Jointer



See illustration and description of Silver's Jointers
on the following two pages

This Cylinder can be furnished for Silver's Jointers, all sizes, as listed below. It is designed for use in place of the regular square head, is made in same sizes and diameters, and uses the same ample bearings of high-speed babbitt.

Greater safety to the operator is the chief advantage of this round safety head, the outer surface of the cylinder being practically smooth with exception of the extension of cutting knives and the slight concave depression of the chip break for the clearance of the cut. For this reason only a slight flesh wound would be the result of an accidental contact with the knives. This safety feature makes these heads very desirable for meeting any stringent factory laws.

The table below gives prices of the safety head only, ready to fit in machine; also prices of machines complete with the safety head instead of square head.

SIZES AND PRICES

SIZE	Safety Head Only	Fig. 890 fitted with Safety Head Complete
8 inch Jointer	\$50.00	\$158.00
12 inch Jointer	55.00	180.00
16 inch Jointer	60.00	200.00
20 inch Jointer	65.00	210.00

The Safety Head includes everything shown in the illustration above.

Silver's New Jointers

Sizes 8, 12, 16 and 20-Inch

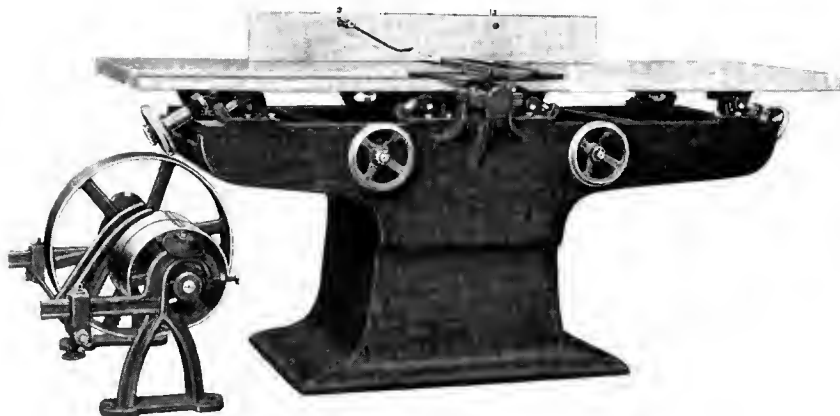


Fig. 890

SIZES AND PRICES

Complete with Countershaft as Shown

Floor Space Over All		Weight Crated	Boxed for Export					Price	
Size	In.	Lbs.	Lbs.	Lbs.	H. P.	Kilos.	Cu. Ft.		
8"	22x68	1070	890	1110	3 to 5	505	31	\$130.00	Ojnes
12"	30x80	1480	1285	1585	4 to 5	719	47	150.00	Ojnot
16"	34x80	1650	1325	1705	5 to 7	774	55	165.00	Ojnuy
20"	38x40	1800	1460	2010	6 to 7	912	62	175.00	Ojory
Rabbetting table for 8-inch machine, extra.....								\$ 7.50	Ojpat
Rabbetting table for larger sizes, extra.....								10.00	Ojpey

SILVER'S NEW JOINTERS

SPECIAL FEATURES

Steel pin inclines instead of slides or grooves for mounting table, mean absolute precision.

Movement and locking of table controlled by hand wheel.

Safety guard furnished with each machine.

The Silver Jointers—Are built from entirely new designs and patterns, and are made in four sizes, with 8, 12, 16 and 20-inch knives.

The Frames—The frames are made in column form, of the most substantial construction, with large floor base.

Cylinder Head and Guard—The cylinder heads are milled from solid forged steel and are T slotted on two sides for moulding, rabbetting and other cutters. For the protection of operator, a movable guard covers the unused portion during work. Pulley is 4 inches diameter and of ample width for 4-inch belt. (On 8-inch machine, 3½-inch diameter for 2½-inch belt.)

The Journals—The journals on a jointer are very important. Therefore we have made them of good length and diameter and have lined them with the best copper-hardened babbitt. They are provided with large oil chambers and self-closing oilers. The journal on pulley side is 7 inches long; the one on operating side is 5 inches long and capped to prevent escape of oil.

Table Adjustments Unique—The vertical and longitudinal adjustments of the table are simple and unique. They are independent of one another, and can be regulated while the machine is at rest or in motion, to suit the thickness of cut or to close the gap over the head.

Steel Pin Inclines—The steel pin inclines on which tables are mounted are a decided improvement over the old slides or grooves. They are absolutely uniform, and have split bearings, clamped with set screws, to take up wear and keep table always firm. The vertical movement of table on these pins is controlled by hand wheel at end; and an auxiliary hand wheel rigidly locks the table at any desired level.

Without disturbing this level in the least, the tables and attached sliding frame can be rapidly withdrawn from knives making same easy of access for sharpening, adjusting or substituting special cutters. This movement of table is governed by hand wheel on working side of machine, by means of cog rack and pinion—totally different from the ordinary construction. The same hand wheel, by clutch device, firmly locks the whole. This device is new and "patent applied for."

The sliding frame is dovetailed into main frame, with adjustable gibbs on side to take up wear.

Table Dimensions—Tables are of iron, planed perfectly smooth, are about 32½ inches from floor and the rear table is constructed for rabbetting. Lengths, front table 42 inches; rear, 36 inches. (On 8-inch machine, front 36 inches; rear 30 inches.)

When desired, a special rabbetting table to attach to regular table is furnished at extra cost. See price list.

Fence and Pressure Spring—The fence can be tilted to any angle from 90° to 45° and can be moved to cut full length of knives. A pressure spring is provided for holding the work to table.

The Countershaft—This has tight and loose pulleys 10 inches diameter by 5-inch face. Should be speeded about 800 revolutions to give the machine a speed of 4000 revolutions per minute. The loose pulley is self-oiling.

Silver's Plain Saw Table

With Safety Guard

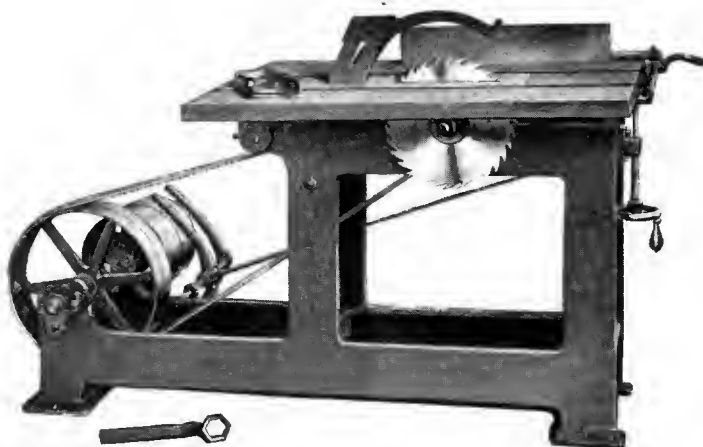


Fig. 891

SIZE AND PRICE

Saw table, complete with 12-inch saw (rip or cut off), weight crated, 875 pounds -----	\$80.00	Ojnah
Extra saws, 12 inches in diameter, rip or cut off, each -----	4.40	Ojpij
Extra saws, 14 inches in diameter, rip or cut off, each -----	5.30	Ojplo
Boring attachment for saw table, extra -----	20.00	Ojpon

Boxed for Export

Net 735 pounds, gross 875 pounds, 397 kilos., 31 cubic feet.

SILVER'S PLAIN SAW TABLE

For shop and factory use or for handling the ordinary run of work, this saw table is efficient and accurate and its low price commands attention.

The Stationary Saw, adjustable table and new frame design are practically the only points of difference from our Fig. 892 Saw Table.

Table on this machine is hinged at back of frame on one-inch steel shafting and the rise and fall at the front is regulated by screw and hand wheel. Table is of iron, in one piece, strongly ribbed and planed perfectly smooth. The cut-off or miter gauge slides in two grooves extending the entire length of table, one on each side of the saw line. It will miter to 45° either way. The wooden throat piece is removable for grooving. Grooving heads up to 2 inches wide may be used.

Frame is cast in one solid piece and is strong, and well proportioned.

Saw Mandrel is carried in well babbitted bearings set in top of the solid frame, so that vibration of the saw is avoided. Journal caps, adjustable for wear, are held in place by four cap screws. Pulley on mandrel has 4 $\frac{7}{8}$ inch face, machined all over. Mandrel is of steel, 1 $\frac{3}{8}$ inches diameter by 24 inches long.

Saw is 12 inches in diameter and projects three inches above table when level. It is easily removed by raising table or removing throat piece. Clamping collar is 4 inches diameter. Saws up to 14 inches diameter may be used.

Fences are entirely of metal, planed smooth and well finished. The ripping fence is held rigid by hand wheel at any angle up to 45°. It opens 18 inches from saw, any desired width being indicated by a scale cut to $\frac{1}{16}$ inch. Can be clamped at any point or can be entirely removed to leave table clear for special work.

Journal Bearings are all fitted with oil pocket and dust-proof, self closing oilers. They have generous wearing surface, are heavily babbitted and made with caps to take up wear.

Safety Guard is a feature not found on any similar machine—and a very desirable feature. It is attached to metal guard over saw, serving to protect the operator from injury.

Non-Creeping Belt Shifter is within easy reach of operator at right. The belt stays where set.

Countershaft is 30 inches long. It is supported in long bearings in end of solid frame. Tight and loose (self-oiling) pulleys are 10 inches diameter by 5 inch face and should be speeded 650 r. p. m. to give saw a speed of 3000 revolutions.

Boring Bit or Chuck can be fitted to rear end of arbor and a special boring attachment for the machine can be furnished upon request, at extra cost. See price list.

Power required to operate—four to seven horse.

DIMENSIONS OF SAW TABLE—FIG. 891

Floor space	41x66 inches
Height of table	32 inches
Size of table, iron	31x38 inches
Size of mandrel for saw	1 $\frac{3}{8}$ x24 inches
Size mandrel hole for saw	1 inch
Diameter saw	12 inches
Distance saw to fence	18 inches
Vertical travel of saw above table	3 inches
Journal bearings, saw mandrel 3 $\frac{1}{2}$ inches long, countershaft	5 inches

Regular Equipment—One 12-inch saw, either cut-off or rip, one cut-off gauge, one ripping fence, one nut wrench for mandrel and one safety guard for saw are furnished with each machine.

Silver's New Saw Table

With Safety Guard, and Pivoted Auxiliary Frame for Vertical Adjustment of Saw

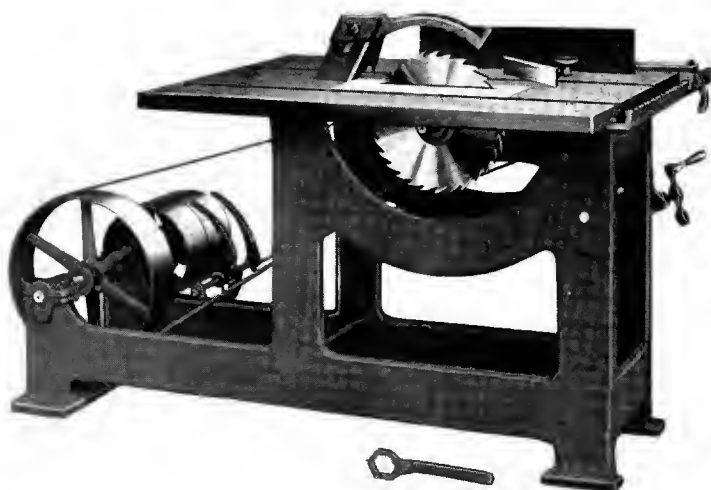


Fig. 892

SIZE AND PRICE

Saw table, complete with 12-inch saw (rip or cut-off), weight crated, 930 pounds	\$100.00	Ojphe
Extra saws, 12 inches in diameter, rip or cut off, each	4.40	Ojpij
Extra saws, 14 inches in diameter, rip or cut off, each	5.30	Ojplo
Boring attachment for saw table, extra	20.00	Ojpon

Boxed for Export

Net 785 pounds, gross 925 pounds, 420 kilos., 31 cubic feet.

SILVER'S NEW SAW TABLE

Utility—Silver's Saw Table is adapted for fine and accurate service. At the same time, it is very rigid, and the construction is such that it will transmit ample power for the rougher and heavier work found in all wood-working shops.

The Table is of iron, in one piece, strongly ribbed and planed perfectly smooth. Two grooves extend its entire length, one on each side of the saw line, to receive the sliding miter gauge. The table is stationary, machined and firmly bolted to the solid frame. Has wooden throat-piece, removable for grooving. Grooving heads up to 2 inches wide may be used.

The Frame is symmetrical and its properly distributed weight eliminates vibration. It is cast in one solid piece.

The Saw Arbor or Mandrel is carried on a pivoted auxiliary frame beneath the table. Its vertical movement is regulated by a hand wheel operating on a segment gear. The saw remains at any level without locking.

The arbor is 24 inches long and $1\frac{3}{4}$ inches in diameter, and is supported by two wide well babbitted bearings with journal caps to adjust wear. The pulley on arbor is machined all over.

Saws up to 14 inches diameter may be used.

Boring Bit or Chuck can be fitted to rear end of arbor, and a special boring attachment for the machine can be furnished upon request, at extra cost. See price list.

The Journal Bearings on both the saw arbor and the counter shaft are of good length, are heavily babbitted and are made with caps to take up wear. Fitted with dust-proof self-closing oilers.

The Fences are entirely of metal, properly machined and fitted. The ripping fence tilts to any angle up to 45° and is held rigid by hand wheel. It opens 18 inches from saw, the width of cut desired being indicated by a scale. Can be fastened by clamp at any point, or can be removed entirely to leave table clear for special work.

Guard over Saw is of metal. It is attached to table and provided with safety dog which serves to protect the operator from injury. This safety guard is a feature not found on any other similar machine.

Belt Shifter, within easy reach of operator. Has device to prevent belt from creeping back, wherever set.

The Countershaft is equipped with tight and loose (self-oiling) pulleys 10 inches diameter by 5-inch face, and should be speeded 650 r. p. m. to give saw a speed of 3000 revolutions. It is 30 inches long and has steel shaft running in long bearings on a rigid stand.

Power required to operate—four to seven horse.

DIMENSIONS OF SAW TABLE—Fig. 892.

Floor space	41x66 inches
Height of table	32 inches
Size to table, iron	31x38 inches
Size of mandrel for saw	$1\frac{3}{4}$ x24 inches
Size mandrel hole for saw	1 inch
Diameter saw	12 inches
Distance saw to fence	18 inches
Vertical travel of saw above table	3 inches
Journal bearings, on both mandrel and countershaft	4 inches long

Regular Equipment—One 12-inch saw, either cut-off or rip, one cut-off gauge, one ripping fence, one nut wrench for mandrel and one safety guard for saw are furnished with each machine.

Silver's New Swing Cut-Off Saw



Fig. 894

SIZES AND PRICES

Swing saw, without saw or belt.....	\$45.00
6½ foot length, weight crated 595 lbs.....	Ojpru
7 foot length, weight crated 620 lbs.....	Ojpuh
7½ foot length, weight crated 630 lbs.....	Ojpys
8 foot length, weight crated 650 lbs.....	Ojray

Boxed for Export

6½ foot size, net 500 pounds, gross 640 pounds, 290 kilos., 17 cubic feet
7 foot size, net 540 pounds, gross 680 pounds, 308 kilos., 17 cubic feet
8 foot size, net 550 pounds, gross 720 pounds, 326 kilos., 18 cubic feet

Silver's New Swing Cut-Off Saw

Shown on opposite page

This addition to our line of high grade wood-working machinery is intended not only for the rough cutting usually done by such saws, but for those who require rapid, accurate and reliable results on fine work in hard wood for cabinet and pattern work, interior finish, etc. It is a strong, carefully designed machine in all its details. To suit different heights of ceilings we make it in four lengths.

The Frame is in the cored form, in one piece and very heavy. It is suspended from the countershaft close to hangers, in such a manner that its weight does not bind or interfere in any way with the free movement of the pulleys.

The Hangers have vertical adjustment for alignment. This adjustment also serves to equalize the wear of saw.

The Countershaft is supported in long bearings in the hangers. It does not revolve, moving only with the swing of the saw, and serves as arbor for sleeve bearing of the pulleys. This gives pulleys absolutely free play.

The Saw Arbor is of machinery steel, $1\frac{1}{2}$ inches in diameter, ground to accurate size. The two long bearings in which it rests are adjustable for wear, are babbitted with best metal, and have dust-proof, self-closing oilers. Each bearing cap contains large oil pocket and is held in position by four large cap screws. The arbor pulley is machined all over.

The Shield for covering the saw and protecting the operator is made of cast iron, securely bolted to the main frame and can be quickly removed when desired.

The Belt Shifter can be used on either front or back of machine and the forks are also reversible, making a sure and easy shift under any condition of belting. The shifter is stationary, does not swing with the saw, and holds the belt without creeping.

DIMENSIONS OF SWING SAW—Fig. 894

Frame (four lengths)—Length from ceiling to center of arbor, $6\frac{1}{2}$, 7, $7\frac{1}{2}$ and 8 feet. Choice of any length at same price.

Saw Arbor—Diameter, $1\frac{1}{2}$ inches. Length $18\frac{1}{2}$ inches.
Diameter where saw is applied, $1\frac{1}{8}$ inches. Length $2\frac{1}{2}$ inches.
Diameter saw collars, 5 inches.
Bearings—Length $4\frac{1}{2}$ inches.
Pulley—5 inches diameter, 6-inch face.

Countershaft—Length, $32\frac{1}{2}$ inches. Diameter, $1\frac{3}{8}$ inches.
Hangers, $9\frac{1}{4}$ inches drop.
Tight and loose (self-oiling) pulleys, 10 inches diameter, 5-inch face.
Driving pulley, 16 inches diameter, $5\frac{1}{2}$ -inch face.
Speed, 550 r. p. m. giving saw a speed of 2000 r. p. m.

Floor Space— 50×42 inches.

Power Required—Five to seven horse.

Regular Equipment—When not otherwise specified, orders are filled with the $6\frac{1}{2}$ -foot machine, equipped with one 18-inch saw shield, mandrel wrench and belt shifter, but no belt or saw.

When desired, shield can be furnished for saws from 18 inches up to 24 inches diameter, without extra cost.

SIZES AND PRICES OF BAND SAW BLADES

Saw	Length	$\frac{1}{4}$ -in.	$\frac{3}{8}$ -in.	$\frac{1}{2}$ -in.	$\frac{5}{8}$ -in.	$\frac{3}{4}$ -in.	1-in.
20 in.	10 ft. 1 in., former length	\$1.10	\$1.10	\$1.20	\$1.30	\$1.40	\$1.60
20 in.	10 ft. 5 in., present length	1.15	1.20	1.25	1.35	1.45	1.65
26 in.	13 ft. 9 in.	1.35	1.45	1.55	1.65	1.80	2.00
32 in.	16 ft. 4 in.	1.55	1.65	1.80	1.95	2.10	2.45
36 in.	18 ft. 6 in.	1.70	1.85	2.00	2.15	2.30	2.75

DIRECTIONS FOR BRAZING BAND SAW BLADES

Scarf the ends of saw off beveling with a file to make a lap joint. Let the bevel run back from the ends of blade about the distance of two teeth. Then put the blade into position in the brazing clamp, taking care that the back of the saw comes perfectly straight, and that the lap joints come nicely over each other in the middle of the clamp. Take a little pulverized borax, mixed with a few drops of water, to form a paste, and spread a small portion between the joint. Cut a small piece of soldering material as large as the joint, and insert this also between the laps; the saw is now ready to apply the heat. Heat the tongs to a good red heat, and apply them over the joint, holding them in position until the heat dies down to a low red, when the tongs can be removed and it then remains but to straighten the blade, and file the joints down to a uniform thickness with the rest of the blade, and the job is done.

For a soldering material, use silver solder or very thin sheet brass. The brass is much cheaper, and makes fully as good a joint as the silver solder, but requires a higher heat to melt it. For sheet brass make the tongs nearly to a welding heat. For silver solder, a bright red is sufficient.

The best way to pulverize the borax, is to put about three drops of water on a smooth slate, then rub a lump of borax on the slate, in the water until a paste is formed.

Always dress the joint down after brazing to the same thickness as the rest of the blade; otherwise, if left thicker the joint will wedge itself into the saw kerf, and break the blade at some other point.

Parties who have a gasoline blow torch (such as is used for paint-burner) can use same instead of the tongs, when silver solder is used. Care must be taken to have joints laid flat together before applying the torch. A piece of very thin wire wrapped tightly around the joint before applying will lessen the risk of a bad joint.

